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VOCATIONAL EDUCATION NUMBER

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PROFESSOR OF INDUSTRIAL EDUCATION, UNIVERSITY OF ILLINOIS

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EDUCATION

Vol. LV APRIL, 1935 No. 8

FOREWORD

ARTHUR B. MAYS
PROFESSOR OF INDUSTRIAL EDUCATION
UNIVERSITY OF ILLINOIS

THE oldest form of education known to man is vocational education. Through the ages man has been careful to train the young to do the work of life. In its earliest stages, vocational education was chiefly a matter of the imitation of his elders by the youth. Later, a recognized practice of apprenticeship developed as the universal method of transmitting skill and useful knowledge from one generation to the next succeeding. Still later, formal teaching of those who were to perform the priestly vocations was generally practiced. These vocations came to be known as "the learnèd professions." During recent years, the training of youth for an increasing number of the vocations of less than professional rank has become the concern of the schools. With the advent of school teaching of such vocations came the modern problem of vocational education.

Modern economic life has become so complex that the problem facing society of preparing its youth for successful participation in productive work is increasingly recognized as one of the most difficult and challenging in the whole realm of organized education.

Specialization and standardization of processes in modern production have caused a marked change in distribution of skill and technical knowledge in industry. The greater number of industrial workers are machine tenders, machine operators, and unskilled workers of various kinds. The skilled workers constitute a small part of the total number of employees, though the actual number of such workers in industry continues to increase.

Provision must be made for the upgrading of workers. The training needed involves definite organized instruction and actual participation in the occupation. No educator can safely ignore the problem of vocational education today.

The following pages present some of the major considerations of this problem by outstanding men in the field of vocational education. Both theory and method are discussed, as well as the relationships of this phase of school work to the other aspects of modern education. Only two specialized fields of vocational education are dealt with specifically in this issue, because the other fields are to be considered in special numbers of this magazine.

THE MODERN MEANING OF VOCATION

WILLIAM H. STONE
PROFESSOR OF EDUCATION, OHIO STATE UNIVERSITY

Dr. Stone here presents a very carefully developed consideration of the social and educational significance of vocation as a social institution.

ALTHOUGH the immediate aim in this discussion is to state a concept of Vocation that is modernly acceptable, since the ultimate concern is chiefly educational, perhaps the most effective approach to Vocation may be made through an educational perspective.

Education in general is recognizing more and more its indispensably intimate connections with life; in fact, education that is most effective must be just life itself, the ongoing actualities of here and now; not the traditional acquisition of isolated information and skills; not preparation for any future excepting as it is cumulatively built through the ever present, —not the whole of present life, however, with all of its crudities and evils, but constructively selected life, increasingly refined, weighted, and made available to learners under proper safeguards of guidance to the end of wholesome growth recognized as "durable satisfactions of life."

Theoretically at least education in general and in its many specialized areas subscribes substantially to the theses stated above. Practically, however, it falls considerably short of such vision. Among the many and varied reasons for these shortcomings, undoubtedly one stands out: viz., having agreed theoretically that effective education is just effective living, practically the school has proceeded to organize and conduct its program without any clear or comprehensive understanding of what life is.

Nowhere, perhaps, is this indictment more justified than in the specialized areas of mature education known as "vocational," whether restricted to those areas legally defined by the national Vocational Education Act (Agriculture, Home Economics, and Trades and Industries), or applied generally to the varied lines of preparation for economic living. For purposes of this discussion consideration may well be confined to the former, although fully as applicable to education in general, including preparation for the professions. Although the vocational education movement upon a national scale is comparatively recent, already a considerable literature has sprung up essaying to define and prescribe vocational education, but containing few constructive attempts to define vocation itself, except ing by implication.[1]

While the foregoing indictment presents substantial facts, its justification may be more evident if stated in a slightly different way. Educators have proceeded by analyses directly to define specific vocations as bases for preparation of workers—indeed analysis has been perhaps the most characteristic effort of the whole vocational

1 A notable exception must be cited in A. B. Mays' "An Introduction to Vocational Education," Chapter I (Century, 1930).

education movement. But even the most comprehensive of these analyses have been based upon a traditional conception of Vocation, hence have fallen considerably short of the actualities of modern vocational life.

Here, again, might be found various reasons why educators generally have failed to vision properly a modern concept of vocation; but possibly it is sufficient to follow this inquiry only one step further to note that even sociologists have been slow to recognize the dominant position and enriched nature achieved by vocation in modern life. Hence, too generally educators figuratively have been looking at specialized vocations through the small end of the microscope—too generally they have reversed the proper approach to social economic analysis. Stated in terms of modern sociological and psychological vision, the analysts have concentrated upon specific vocations as dissociated parts rather than through Vocation in general as unifying core of the social whole.

In light of these considerations, obviously specific vocations may be comprehensively conceived only when (1) seen in their total social context, and (2) when seen in their individual entirety. Obviously, also, this prescribes the proper approach: viz., vocations as parts must be seen in the light of the social whole before they may be separately understood.

Now clearly the limits of this discussion will not permit such an approach in any detail, with supporting evidences and references. With the foregoing considerations in mind, however, our present purposes may be substantially served by a somewhat pointed presentation of the more basic facts of social organization, defining thus the place and importance within it of Vocation in general, and of vocations in particular.

Vocation in Total Social Organization

Succinctly stated, what we call society as a whole is the integration or unity of six major institutions, each of which embodies or is organized about a fundamental principle of function of life. These basic instinctive activities and their institutional embodiments are: (1) genetics, in the family or Home; (2) civics, in the State; (3) religion, in the Church; (4) play, in Recreation; (5) education, in the School; and (6) economics, in Vocation. Although common practice breaks down these major institutions into many subordinate areas of activity, loosely referred to as "minor institutions," such as press, stage, banks, factories, and the like, the fact remains that all proper individual-social participations may be correctly classified within one or more of these major areas; hence, in their interrelationships they constitute the structure known as society.

Or if one prefers to agree with Dewey that "societies" rather than "society" describes the social order, then they and their interrelationships constitute these societies. However, the constructiveness of this viewpoint may well be questioned, both as to fact and desirableness. If history teaches any one indisputable fact, whether read in narrative form or gleaned from scientific phenomena—biologic, archeologic, and the rest—it is that human progress has come chiefly through increasing social solidarity—transition increasingly from individualistic to coöperative pursuits.

Manifestly institutions however classified have emerged simply because human beings have found what they conceived as more durable satisfactions by following their instinctive activities into organized social behavior. Hence, while social organization may not thus far have advanced well beyond the "societies" of institutional patterns, large and small, surely it is highly desirable for all organized effort to seek the total unity of the "brotherhood of man."

Rather than extend enumeration of evidences or arguments favoring total social unity, however, it appears more constructive at once to recognize that man has unceasingly sought total social solidarity, trying out at various times various institutional principles as dominant integrating means. In more primitive times or conditions, the Home provided this dominant element; again it has been the Church; again, the State. And while still all institutional principles exert an organizing influence, now it is social-economics, the unifying principle in vocation, which is increasingly recognized also as dominant in binding together society as a whole.

Obviously here is a fact of first importance in conceiving Vocation in its modern meaning; viz., predominantly it is vocation, the work done, that more than any other single phenomenon gives character to men and women, singly or collectively.

The Comprehensive Character of Specific Vocations

Having placed Vocation properly in its total social context, it remains briefly to point out the comprehensive nature of the specialized pursuits which collectively embody the economic function of life in this dominant institution. Traditionally, a vocation has been regarded as a purely economic pursuit — money getting, materialistic, highly individualistic, hence sharply dissociated from other functions of living; in fact, largely in obstructive conflict with the higher impulses to culture and refinement. But modernity can no longer permit this perverse connotation; increasingly a vocation becomes effort exerted towards the durable satisfactions of life, among which money is but one. Moreover, the unity of all life and the integrating influence of the economic function noted in the foregoing discussion at once demand an extension of concept beyond mere earnings of whatever kind, whether material or spiritual satisfactions. Earnings are but a one-way movement of the social-economic function of life, which may no longer be dissociated from the complementary movement, the use that is made of them. Hence, a vocation is as inextricably connected with consumption as with production. In other words, and to summarize briefly, a vocation is a coöperative enactment of the social-economic function, an alternating current of activity comprehending both the earning and the utilizing of the durable satisfactions of life, material and non-material, as these are defined and evaluated by the accepted criteria of total social welfare. Thus it acts as a unifying factor of every phase of life activity, and by its basic and profund influence attains its dominant position in total personal-social organization. The ineludable intimations of these facts must become obvious for effective education, general and vocational.

AMERICA WANTS VOCATIONAL EDUCATION

F. Theodore Struck
HEAD, DEPARTMENT INDUSTRIAL EDUCATION
THE PENNSYLVANIA STATE COLLEGE

Dr. Struck has shown in a most striking manner the significance of vocational education as a phase of the American public school program.

THE people of the United States firmly believe in vocational education. It would be strange if they did not, for it has long been recognized that vocational competence is the foundation upon which happy family life rests. To be sure there are other essentials, but before we can have leisure which may be devoted to the community good, or to literature, music, the drama, and other of the fine arts, there must be vocational competence. Vocational education makes it possible for man to reduce the hours that he must work for the necessities of life, thus making culture possible. It must be evident, therefore, that vocational education deserves recognition not alone because it makes people occupationally competent, but also because other socially desirable life experiences are directly dependent upon it.

John Dewey once said: "To find out what one is fitted to do and to secure the opportunity to do it is the key to happiness." Practical arts education of the try-out, exploratory, guidance and appreciation types helps young people to find out for what they are best fitted. Vocational education carries that essential process a step further and helps them to secure the opportunity to do that for which they, by native endowment, training and interest are best equipped. It is a matter of common knowledge that employers will give preference to young people who have previously had some training for the work they are to do. The breaking-in period is thus reduced; the worker reaches maximum production more quickly; he is less likely to get hurt, less likely to waste materials, and less likely to cause damage to tools or equipment. A follow-up study made in a city of about 50,000 population showed that approximately 65 per cent of the graduates of the vocational curriculum in the public schools were employed in the vocation for which they were trained, or in closely related lines of work. Effective vocational education of that kind is indeed a blessing. To speak of such educational achievement as being primarily "material" or "utilitarian" would show a most juvenile conception of the fundamental importance of vocational education, and of the manifold inter-relations between vocational and non-vocational life-needs.

America believes that an education at public expense is the birthright of all children in a nation founded upon principles of democratic government. She believes, furthermore, in equivalent as distinguished from literally equal educational opportunities. In other words, the people of the United States favor vocational education because it provides specifically for the many who will earn their living in occupations for which general education does not directly provide. Voca-

tional education is to the prospective farmer, business man, homemaker and worker in industry what a college education is to the dentist, doctor, teacher, lawyer or engineer. To provide vocational education of college grade at public expense to those expecting to enter the professions and to withhold vocational education of less than college grade from those who will have a large share in doing the work on the farms, in homes, in industry and in business is manifestly not providing *equivalent* educational opportunities.

Among the important essentials in a forward-looking, dynamic and progressive program of public education are the following: (1) To develop analytical, clear-headed and reflective thinking; (2) to provide socially and economically essential knowledges and skills; (3) to develop socially desirable attitudes and ideals, as for example, attitudes toward all honest, conscientious labor; and (4) to provide for the development of initiative and adaptability. That programs of instruction where work and theory are so intimately and functionally combined as they are in vocational education as conducted under State Plans for Vocational Education, and in harmony with the provisions of the National Vocational Education Act, make for all of the four objectives just mentioned is generally conceded. To illustrate how the schools must adapt their programs to constantly changing conditions it may be pointed out that in Pennsylvania the enrollment in continuation schools dropped from 42,685 in 1930 to 4,315 in 1934. This decrease of 889 per cent was due largely to changed business conditions. All over this country the part-time continuation schools have become all-day or full-time schools.

When the National Vocational Education Act of 1917 went into effect there were very few vocational schools, under the auspices of public boards of education, that could measure up to the standards set in the Act. At the close of the first fiscal year the number of students enrolled in vocational schools operated under State plans and in harmony with the provisions of the National Act was 164,123. By 1932 that enrollment was increased to 1,176,162. What wisely directed state and federal subsidy has done to stimulate the construction of good roads in America, has its counterpart in the raising of standards in public vocational education, where the quality of instruction has been raised to a high level through the provisions in the State Plans for Vocational Education, which set up high requirements that had to be met if state and federal aid was to be given. Every dollar of federal vocational educational funds (including all types) was matched by $2.97 of state and local money in 1932. In the area of trade and industrial education the ratio of federal to state and local expenditures during the same year was as $1.00 is to $5.06. This shows that the states have not been satisfied merely to match the federal funds dollar for dollar, as is required by the Act. The beneficial effects of state and federal aid to vocational education may be judged from the following case selected at random. In San Antonio, Texas, the enrollment in the vocational schools in 1926-27 was 3,676, when no state or federal aid was granted. The following year, 1927-28, when state and federal aid made it possible to extend the offerings the enrollment increased to 5,276, and a year later to 5,970 pupils—a gain of 62 per cent in two years.

The claim is sometimes made that the schools have isolated themselves from life—that they have become artificial, abstract and theoretical in their teaching. Whatever the facts may be, it is not our present purpose to discuss, but it may be to the point to call attention to the fact that vocational education was placed in the public schools because parents, business people, manufacturers, and labor felt that for many the traditional curriculum was too bookish and that "practical" instruction also deserved public support. The generally accepted slogan in public vocational education is, *"Cooperation between the schools and the community."* Advisory committees representing dominant community interests or activities are appointed to aid the schools to "keep their eyes on the skies, their feet on the ground, and their nose to the grindstone." As an illustration of what a city of approximately 45,000 population is doing to adapt its school service to urgent life-needs in the community a brief reference is herewith made to the program of vocational education conducted in Williamsport, Pa. Early in 1931 the schools undertook re-training service for unemployed adults. By May of the same year twenty per cent of the students had been placed on jobs. Encouraged by this the program has been greatly extended. By the close of 1932 a total of 1,566 adults had received re-training service, and the work has grown so much since that time that in spite of the fact that three large shop units have been added, available teaching space is at a premium. The community is strongly backing this re-training program. The taxpayers of Williamsport are sure that the advantages secured through this expansion of public school service to the area of adult education more than justifies the additional expense involved.

Labor organizations have many times gone on record as favoring vocational education under public school auspices. Labor recognizes that the public vocational schools try to teach the subject-matter they cover thoroughly; that the schools give instruction impartially, and that they are a distinct help in assisting learners to understand the related trade theory which is seldom taught "on the job."

Employers, too, believe in vocational education under public auspices. There was a time, not so long ago, when employers could themselves afford to train apprentices, but, by and large, that day is past. The mobility of labor, the fact that industry is today organized solely for production and only incidentally for instruction, and finally, because employers as well as others feel that the schools have many distinct contributions to make through their programs of vocational education — these and other reasons point toward increasing the offerings in vocational education in the public schools, or under their control.

Many believe that vocational education, together with other means, is absolutely necessary if America is to regain the high standards of living that have been enjoyed in the past. They feel that to win strong public support for a relatively new and comparatively expensive form of public education in a time of shrinking budgets and reduced incomes, as vocational education has done, is no mean accomplishment. America believes in vocational education for what vocational education has accomplished and even more for what it hopes to achieve.

VOCATIONAL EDUCATION
Where Are We Going and When?

R. O. Small

DIRECTOR, DIVISION OF VOCATIONAL EDUCATION
MASSACHUSETTS STATE DEPARTMENT OF EDUCATION

Dr. Small has given here a most inspiring analysis of the program of vocational education as it is now developing in the United States.

HARRY OVERSTREET tells us in one of his recent books that "We move in new directions." Yes, this is an age of change.

Changes of a vocational character demand speedy new adjustments of old skills. Can vocational schools keep pace with the demands, or must a new, less static agency be developed to cope with the situation? This is the question.

Some are answering, and I am among them, that if these schools can not do it, no other agency offers much promise. Look at those schools and examine their programs. Look at them, and be grateful that the demands of democracy created them and that any new demands of democracy will find them eager to "measure up" to their new responsibilities. In these schools we have a nucleus from which to radiate and establish new practices and procedures. "New occasions teach new duties," and we vocational people are learning what some of them are.

1. A Situation in Massachusetts

A. Considered Quantitatively.

	Minors 14-16	Out of School	Per cent
1922	135,566	43,172	31.8
1932	154,987	12,215 (1933)	7.9

	In School	Per cent
1922	92,394	68.2
1932	142,772	92.1

The full-time day schools of Massachusetts now annually care for at least 31,000 minors who in 1922 were out of school and at work.

B. Considered Qualitatively.

Qualitatively these minors compose a special group. Just how special has not been fully appreciated.

Since 1917 we have kept accurate statistics covering the educational acquirements of minors who for one reason or another left full-time day schools to go to work.

From this group of minors recent social-economic legislation (N. R. A.) has returned large numbers to school on full time. Our statistics establish a certain definite index of the type of boy and girl whom we are thus called upon to serve in our full-time schools. If we discharge our full responsibility, we shall not only serve them culturally and civicly, we shall fit them for advantageous entry to employment when they leave us to go to work. This is the group that formerly left school to go to work. That is what they will continue to do if there is any employment for them. If they are fitted for employment they will become social assets. If they are not so fitted many of them will become potential social liabilities.

Here is what our statistics tell qualitatively regarding 385,000 different individual minors in the age group 14-16 who left our full-time schools to enter employment.

Massachusetts Minors 14-16 *Years of Age Certified to Enter Employment,* 1922-33 (*inclusive*)

For these 12 years pupils left school to enter employment from the Grades and to the number indicated below:

THE RETARDED GROUP
Totals (12 years)

Normal	Left Grade Below 4th	Left Grade 4th	Left Grade 5th
Ages	(8-9)*	(9-10)*	(10-11)*
Boys	1,886	1,579	4,037
Girls	975	795	3,085
Total	2,861	2,374	7,122

	Left Grade 6th	Left Grade 7th
	(11-12)*	(12-13)*
Boys	62,694	47,522
Girls	59,326	47,440
Total	122,020	94,962

229,339 = 59.5% retarded
Boys 117,718 = 30.5% retarded
Girls 111,621 = 29% retarded

In the Regular Schools a Study made in 1926 found 10.3% retarded.

THE NORMAL GROUP: Totals (12 years)

Normal Ages	Left Grade 8th (13-14)*	Left Grade 9th (14-15)*
	Totals for 12 Years	
Boys	46,533	22,494
Girls	50,834	22,204
Total	97,367	44,698

142,065 = 36.9% normal
Boys 69,027 = 17.9% normal
Girls 73,038 = 19% normal

In the Regular Schools a Study made in 1926 found 62% normal.

THE ACCELERATED GROUP
Totals (12 years)

Normal	Left Grade 10th	Left Grade 11th	Left Grade 12th
Ages	(15-16)*	(16-17)*	(17-18)*
	Totals for 12 Years		
Boys	5,977	895	235
Girls	5,650	871	250
Total	11,627	1,766	485

* Normal ages for the grade.

Normal Ages	Left Grade Above 12th (18-)*	Grand Total 12 Years
Boys	69	193,921
Girls	66	191,496
Total	135	385,417

14,013 = 3.6% accelerated
Boys 7,176 = 1.8% accelerated
Girls 6,837 = 1.8% accelerated

In the Regular Schools a Study made in 1926 found 27.7% accelerated.

2. *Two Groups*

Studies of this table on qualitative data, together with studies of persistency-of-membership in enrollment of day industrial schools, show that most of the 31,000 minors mentioned in Table A above, and most of the 385,000 in Table B divide into two general but overlapping groups.

Group 1. (The smaller group: Members.) They have well-defined choices. They are interested in securing employment as skilled workers. They will take training and persist in the necessary serious preparation for advantageous placement in the trade chosen.

Group 2. (The larger group: Members.) They are interested in securing an opportunity to work for wages. They are not serious nor settled in their choices. They will not or cannot remain in training much beyond the age of 16 (our upper compulsory school age).

The two groups separate quite definitely at or near the sixteenth birthdays of the minors.

Individuals at the extremes of either group are very far apart in capacities, interests and objectivity.

The second group can neither profit by nor be properly served in the pro-

gram planned for the first: dominantly the program found in our vocational schools at present.

3. Two Different Vocational Programs Are Needed

A. The present unit trade school vocational program is planned for the first group. It is well established in certain cities and towns.

B. A vocational program, organized on more general lines and with shorter training periods, is needed for the second group.

We have the nucleus of such a General Vocational Department wherever there is a Continuation School organization.

4. A Definite Proposal

Establishment of general departments as vocational schools, or as parts of vocational schools is then advocated for two definite reasons:

A. To conserve the unit trade schools for those who can profit most by this organization, and to minimize the uncertainty of securing employment in narrowing fields of specialized unit trades, and

B. To afford specially diversified training for those who can be best served by a new organization. Many minors must be helped this way if helped at all.

5. The Organization of the General Department

This General Department should be organized to include the Continuation School work.

Into the General Departments we should admit boys and girls who cannot or do not aim to spend a long time in vocational training. These beginners may go no further than the General Department, or they may move to unit trade courses, if desirous of so doing and able to meet certain established prerequisites.

In these departments we should afford a specially planned cultural program, citizenship training, physical betterment courses, vocational guidance, and diversified vocational experiences planned to assist in securing placements in such employments as may be open in the community served.

Much of the vocational training should be on odd-jobs levels, where certain minors enter employment, and should help to change the shifting at these levels from aimless drifting to planned preparation for, entrance to, and advancement in, employment.

When these minors get out of work, they should turn to the school for more help, advice and training. This Department should become a placement agency, and enlist the active interest of the employers as such.

6. The Specific Objectives of These General Departments

A. To show each pupil that he or she can do good work in some socially worthwhile occupation or service, and to develop interest, confidence, and pride in doing it.

B. To develop dexterity and versatility in doing a variety of odd jobs, semi-skilled industrial processes, simple domestic and personal service work.

Industry does little to develop latent versatility.

C. To develop skills and knowledges which will assist in getting jobs and in advancing to jobs likely to open after a few years of experience.

Courses should be based upon the work and the processes in which these minors may potentially secure employment and be planned to promote an understanding of such jobs and processes.

D. To discover and develop special talents and aptitudes delayed or undiscovered at time of enrolment.

E. To develop good work attitudes and habits.

F. To develop good social attitudes and habits.

G. *To bridge the gap between the academic school and industry by providing work and an environment somewhat like that of industry, by providing instructors who understand both industry and adolescents, and by securing a coöperative understanding by employers of the aims of this school and the work of the pupils.*

7. *Can This Be Done?*

Since one year ago we have established over twenty general vocational departments devised and planned to carry into effect and accomplish these objectives.

To make it effective we start with a careful survey of the community served to discover the jobs to which these minors may look forward. The program of the department is then based thereon.

Two sample comparative surveys are given below. The work certificates issued to minors (16-21 years of age) securing employment were used in each instance. These surveys show how varied our programs must be.

Significant Differences Revealed By Occupational Studies at Cities A and B

Factor	*A (Industrial)*	*B (Residential)*
	Pop. appr.	
Minors (16-21) securing work certificates, Sept. 1933 to Sept. 1934	112,000 *Work certif.* 1,072	65,000 419
No. different initial jobs entered by minors....	84	53
Per cent of no. of boys securing work certificates to enter factory occupations	60%	23%
Per cent of no. of girls securing work certificates to enter factory occupations	71%	49%
Per cent of no. of boys (minors) securing service jobs (excluding domestic service)	33%	68%
Per cent of girls, store clerks	21%	26%
Per cent of boys, store clerks	17%	29%
Per cent of girls (minors) securing service jobs..	26%	51%
Per cent of boys securing initial jobs at 16 years of age	46%	24%
Per cent of girls securing initial jobs at 16 years of age	59%	10%
Average age for boys at which initial jobs are secured	17.1 yrs.	17.7 yrs.
Average age of girls at which initial jobs are secured	16.8 yrs.	18.0 yrs.
Per cent of *all* minors, 16-18 inclusive, securing jobs, exclusive of domestic service and some office jobs	17%	13%
Per cent of work certificates issued for jobs outside city zone..	Negligible (less than 1%)	40.8%
No. of retail stores in proportion to population	*Population* 112,000 2,353	65,000 413

Vocational Education is going to continue to serve in the all-day and and evening unit trade schools that group of our youth who can profit by

long-term training planned to afford them advantageous entrance to the highly skilled trades and those highly skilled craftsmen who need upgrading in their trades.

In addition to this, Vocational Education is going to serve a much larger group of youths and adults in a wide field of initial and supplementary vocational adjustment courses—short or long—planned to meet the special needs of the individual served.

A CONTRIBUTION OF VOCATIONAL EDUCATION TO EDUCATIONAL METHODS

LAURENCE PARKER
STATE SUPERVISOR OF INDUSTRIAL EDUCATION
STATE OF NEBRASKA

Mr. Parker shows in entertaining manner the important contributions to educational methods that have been made by vocational industrial education.

TO a dweller in the Midwest, a mountain highway is a continuous source of amazement. Its carefully planned grades and wisely banked curves prompt one to exclaim, "What a smart man it took to build this highway." There is no doubt but what the men who did the final planning on these broad ribbons of concrete over which you skim "in high" had real ability. But, as you drive along you see unused loops of an abandoned highway much narrower than the one on which you travel, crowned perhaps, and with short turns and hair-pin loops. With relief you say, "I am thankful I don't have to travel. *that* old road." And then, once in a while, you will see traces of a still older road through the mountains, rutted, steep, and narrow. But even that was not the first road, for long ago men and animals blazed the way, making narrow, zig-zagged trails. It has really taken the experience of the pioneer who blazed the first trail, the road builder of the early day, and his successor who made the narrow road, to help make possible the building of the highway which gives us such pleasure and comfort today.

The same thing is true in all the branches of life, whether it is manufacturing, agriculture, home-life, or education. Since we are especially interested in education, we are most interested in its applications to that field.

In 1914, President Wilson appointed a commission to investigate the nation's needs and suggest a plan for the teaching of trades in our country. We shall always honor him for the wise selection of the personnel of this committee, through whose efforts, and those who followed, came the Vocational Education Act, under which thousands of men and women, boys and girls, in agriculture, homemaking, and trades have their opportunity for definite, intensive, practical instruction.

These framers of the Vocational Education Act were about to build a broad highway leading to definite results. It is claimed that the location engineer of a railroad or highway can improve his work of location if he can skim over the surrounding country in

an airplane. Spread out before him is a relief map which will show him his route much more vividly than he can get it from any topographical map his subordinates may make for him. The members of this group of planners in education must have viewed education as it existed at that time from a high point and taken into account the experience that our countrymen have had with education all down through the years since the days of "the little red schoolhouse" and "the three R's."

From this high-point view came two fundamental principles of operation in trade training which have been a definite contribution to all education. These principles lead from one to the other in a natural sequence. The first of these declares that no one shall teach a trade unless he has had enough of the actual experience in the trade to enable him to teach it from his own experiences, *primarily,* supplemented by other teaching aids. This would seem to be a self-evident prerequisite to success in teaching, but experience in public schools, especially in the secondary field, shows that such is not always the case. Many instances may be cited where teachers have majored in history, and in order to secure employment have been required to teach other branches. Gradually they have accumulated a fund of technical information that has made them competent, and they may never return to the branch of teaching in which they specialized.

These wise planners of the Vocational Education Act felt that it was absolutely necessary that the man who should teach watch repairing, for example, should be a watch repair man of experience. That because there was to be no electrical work offered in a given year, the instructor of electrical subjects must not be transferred to the sheet metal shop. That, in order for boys to learn to be sheet metal workers a teacher is required who possesses at least two years of practical experience beyond the apprentice stage. This all seems very commonplace to us now, but back in the years from 1914 to 1918 it was not so clear to many educators.

In their wisdom, this group of men and women who were building a broad highway for trade education realized that if these teachers with abundant practical experience were to make a success of teaching their trades, they needed very definite help in the organization of their own trade experiences both before they started to teach and during the first few years of their teaching experience. This resulted in the setting aside in the Vocational Education Act of definite sums of money to be used for the express purpose of preparing practical workers to teach and for giving them help in the field after they started to teach. All this might have been merely a requirement under the law, or a so-called technicality, if it had not been for Dr. Charles Prosser and Dr. Charles E. Allen. These pioneers in trade training in their experiments with vocational education prior to 1917 had hit upon what we know today as "trade analysis." It is believed that trade analysis, together with the systematic organization of instructional material which has followed from it, has been the second of the two greatest contributions that vocational education has been able to offer to the educators of all fields today.

This procedure enables a practical man or woman to bring forth from his

store of experience all the pieces of information and bits of skill which should be passed on to the young learner of the trade. Not only pulling it out of his recollection but setting it in orderly sequence between definite checking levels and levels of employability. Of course, after the first year or two that a given trade has been taught, the prospective teacher coming out of his trade to teach it could have been "fed with a spoon" from the trade analyses of those who have gone before and blazed the trail. He would then have been following the traditional text-book method. But, one of the greatest benefits that has come from trade analysis has been the benefits to the individual himself which have arisen from his organizing his trade and teaching from his own experience under skillful guidance. Of course he should check his experience against the experience of others, but at the same time he should make sure that the net result comes largely from his own experience.

This plan for the organization of skills and related information to be taught, after having been drawn from the experience of the individual and arranged in proper order must come largely from the work habits of practical men drafted into teaching and the teacher-trainer positions. A practical worker works from plans. Only a "jack-leg" worker starts a job without a plan. The better the job, the more carefully are plans and specifications drawn up for its execution. Therefore, master workmen preparing to do a job of teaching naturally turn to the preparation of organized instruction material in the form of job sheets, information sheets, and reference sheets as plans and specifications for the performance of an important job.

To those who see a well-written job sheet for the first time, it is a revelation; it is a plan for the teaching of a particular piece of skill, taking into account just what the boy already knows, just what the requirements are in the proposed job, and just what is needed in the way of tools, equipment, and material. Here again, a prospective teacher could perhaps do a passable job of teaching by using only the job sheets and other organized instructional material of those who have already thought through the problems involved. He would then become a text-book teacher. Such a procedure would be cheating the embryo teacher of the great privilege of organizing the instructional material for himself. He should, of course, use the experiences of others for a check against error and for inspiration and improvement. If, under the Federal Act, the funds set aside for helping prospective teachers organize their instructional material had been continued for only such a period as would enable pioneer teachers in trade training to map and chart the teaching of these trades, it would have been only a few years until the teaching of trades would become text-book routine.

The wisdom of these planners is shown in the fact that so long as trades are taught within a state, systematic development of prospective teachers and facilities for the improvement of teachers in service shall continue. This means that through the years, fresh groups of men from a great variety of trades will continue to an-

alyze their trades from their experience, and to think through the problem of introducing the youth of our country to these same experiences which they themselves have had in industry. It seems clear that this selection of practical workers as teachers and the plan for trade analysis and the organization of instructional material are the great contributions that vocational education has been able to offer to the educator in other fields.

ANALYZING A SUBJECT FOR TEACHING PURPOSES

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One of the most valuable contributions to method and course planning in vocational education made during the past quarter century is that of Professor Selvidge. Here he gives a brief discussion of the basic step in course planning in vocational education.

AN analysis of a subject for the purpose of selecting satisfactory units for teaching, or learning, involves many considerations. Some teachers may wish to present only the elementary phases of the subject, while others may desire to cover it quite completely. The maturity of the student, the purpose for which the work is given and the method of presentation must all be considered. In view of this it is not surprising that we find considerable differences of opinion in the selection of these units.

If certain fundamentals are kept in mind, however, many of the apparent difficulties and differences of opinion will disappear. The learning units do not have any relation to the lesson period. An analysis should not be regarded as a fixed and unchangeable thing, but as a device designed to call the attention of the pupil to some specific thing he must learn and the attention of the teacher to some of the specific things he must teach. It is not expected that all teachers will be able to present all of them, nor that all pupils will be able to learn all of the things that are presented.

A learning unit may contain a number of related items which are usually presented together, but items should not be placed together as a teaching or learning unit which are not usually presented at the same time. For example: we should not select as a teaching unit, "How to adjust a jack plane and a block plane," because we do not teach both of these items at the same time. On the other hand, we might take as a unit, "How to adjust a jack plane," although such a unit would include adjustments for depth of cut and lateral adjustment.

The beginning units usually are smaller and contain fewer items than the more advanced units. Where instructions are given by presenting a standard to which the student must conform, the units may be somewhat larger. For example: "How to place dimensions on a drawing," includes many things, but the instructions may be given by presenting examples of various kinds of dimensions properly placed, and the student may select the examples which fit his case.

There is no particular mystery about the analysis of a subject or a

trade for teaching purposes, and there is no reason for concealing its simplicity with a lot of mummery. It is simply a listing of the principal things you want a boy to be able to do and the things you want him to know when he has finished his course of instruction. It will be necessary to break these up into units sufficiently simple to be readily understood by the class of students who are to receive the instruction.

The only reason for the classification into "Learning units involving operations" and "Learning units involving information" is that the method of learning involved in these two types is quite different. One involves the development of skill or a fixed manipulative habit, the other involves the acquisition of information or ideas through reading, conversation or reflection. The recognition of this distinction is helpful in preparing teaching plans. In teaching units where there is such a mixture of skills and information that there is some doubt as to the group in which the unit should be placed it may be placed in either group with equal satisfaction.

INCIDENCE OF PROBLEM SOLVING IN SHOP TEACHING

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Dr. Fryklund has emphasized in a most convincing manner a much neglected and very important aspect of teaching in industrial education.

THERE are many theories regarding educational outcomes that have set forth the primary responsibility of the schools as that of training youth so there can be adequate adjustment to environment. Modern education must include among its goals not only *adjustment to environment,* but it must also include *control of environment.* The former is static and the latter is dynamic in its functions. One charges the schools to teach youth *what to think,* and the other that they teach youth *how to think.* In whatever field of education, youth must be given opportunity to develop both of these desirable human abilities.

School curricula of the present include selected experiences of the past in order that youth may understand the working principles underlying existing society. These experiences are selected from many fields of world activity. They form the knowledges and appreciations necessary to be known by the individual in order that he may adjust to his environment. With proper training these knowledges and appreciations also form the working tools by which the well trained individual can initiate, organize, and direct changes in his environment.

Every field of activity represented in the schools should meet completely its responsibilities by providing experiences that will subsequently enable its trained youth to think successfully through problems of special kind. There should be problem-solving experiences peculiar to the field in question, whether in mathematics, sciences, fine arts, industrial arts, or in trade training. While everyone may not

gain proficiency in effective thinking procedures, or in problem solving, everyone should be given opportunity for such development as early as possible in school life.

Teachers in the industrial arts and in the trades share the responsibility of including as one of their major aims the task of training youth how to think in shop procedures. In the shops there are problems in abundance; there is no end to the opportunities available to train youth in developing initiative of the kind necessary in solving its special problems. Unfortunately, in many shops, as in other fields, these opportunities are frequently unrecognized. This is usually true under the instruction of shop teachers who have not been trained in modern methods of analysis and teaching. They cannot identify the instructional units in a given activity and therefore do not teach them. Shopwork to them has no particular aim other than that of "making things." It frequently is puttering and only a minimum of abilities are acquired by the pupils through casual instruction.

It is trite to say that in all subjects or subject fields involving creative work there are problems to be solved. Likewise, there are certain fundamentals which, in various combinations, are necessary to their solution. Problems are solved through judgments formed by the problem solver in combining fundamentals so that the particular combination becomes the solution of the problem in question. Mathematics may be cited as an illustration, because in this field problem solving is evident to everyone, whereas in other fields it would be determined by special analysis and synthesis. In mathematics there are operations which, in combinations determined by the problem solver, constitute the elements necessary in the solution of a particular mathematical problem. These operations are *constants.* They have existed through the ages, and they will continue to exist. The problems, however, are *variables,* and they are constantly changing.

There are problems today that were not evident years ago, and no doubt years hence there will be new problems undreamed of today. But the fundamentals, or operations, necessary in the solution of problems will, through the ages, remain the same. Today there are problems in aeronautical design which are solved by the same operations, but in different combinations, that were necessary in the solution of problems that existed long before present-day aeronautics.

In shop subjects, too, there are operations or fundamentals. They are *constants* in the special activity. There are also problems or *variables* in the shop that must be solved through particular combinations of these operations. These problems are the completed projects and they are known as jobs. A combination of manipulative operations together with necessary technical information forms the solution of a particular problem; it results in the successful completion of a project. The operations are the instructional units. They must be taught by the teacher just as the operations in mathematics must be taught by the teacher. The planning of procedures and the subsequent making of projects serve as vehicles of training in problem solving, just as type problems serve as vehicles of training in mathematics.

In all good teaching when the learner is required to solve the problems of the activity in question, the instructor teachers the fundamentals, or operations, necessary in the solution of problems. And further, in such teaching, type problems are used for giving training in combining the fundamentals in various ways. There is still drill in solving problems by application of combinations of operations that have been taught. New operations are taught continuously, and they, in combination with operations previously taught, are applied by the learner in the solution of new problems as the days and months pass.

At no time should the teacher tell the learner how to solve problems. This would deprive him of opportunity to learn how to think effectively in shop work. The major achievement is not just that of performing manipulative operations necessary in the making of projects with the instructor at hand to tell when and where the operations must be performed. When a given operation has been completed it should not be necessary for the teacher to tell the learner what should be done next. He should not indicate each step that must be taken or give to the learner a list of tools and materials that will be needed in building. Shop work conducted on such a basis would have little if any educational value. It would be telling *what to think*, but it would not be teaching *how to think*. Unfortunately, much shop work is still taught in this manner.

It should be the learner's responsibility to plan his own procedure for every project he undertakes in the shop. He should read his drawing, or make a drawing if none is available, make his own bill of material, and determine his own costs. He should list the major steps of construction in their proper sequence and list the necessary tools. This plan of procedure should be written on note paper or on a special card provided for the purpose, so the instructor can examine it. The instructor should check carefully to see that the learner has planned a logical procedure; so that he has formed what seems to be an adequate solution of his problem. The written plan of procedure is the written plan of attack by means of which the teacher determines how well the learner has thought through his project from beginning to end. Such planning involves reasoning of the highest type. It is just what anyone who is doing creative work must do before starting a new project. The lawyer, doctor, engineer, architect, teacher, orator, musician or artist must plan carefully in advance if his proposed effort is to meet with success. Pencil and paper are not always necessary for planning in activities outside of school, but planning is necessary nevertheless. In teaching, however, it is not always possible to depend upon a learner's say-so, and therefore the written form serves as a control.

Training in planning procedures, or problem solving, should start with the beginning projects. During these early lessons, the teacher should give special attention to planning, so that the learner may learn to plan just as he learns to perform operations. In fact, the teacher should teach how to plan a procedure just as he teaches how to perform an operation. Planning may be crude and simple, at first, but there must be a beginning in this as in everything else; and there is

nothing to indicate that it cannot begin as early in the shops as in other subjects. The pupil should be taught early that planning is an ability which is highly essential for success in the shop. He should also learn that he will be held to account for everything he has been taught and that he will be expected to draw from his accumulating knowledges for each subsequent project he undertakes. The extent and thoroughness of accumulated experiences, and intelligence, will influence the speed and thoroughness of the planning. Planning will improve with each succeeding project and with advancement in the subject.

Planning does not preclude instruction in performing operations. On the contrary, it creates a state of readiness for instruction on new operations. New operations must be taught in the shop just as new operations must be taught in arithmetic. The form of instruction may be oral or written, but use of both increases the opportunities for learning. In fact, it is common knowledge that the greater the variety of devices of instruction in a given subject the greater are the possibilities of coping with individual differences. It is the teacher's duty to see that all necessary instructions are available in a form which is readily understood.

To require a plan of procedure for every job undertaken is to provide that experience which teaches youth how to think in shop activities. It is the incidence of problem solving in shop teaching.

WHAT OF UNEMPLOYED YOUTH?

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Dr. Myers has presented a most interesting and thought provoking analysis of the responsibilities and opportunities of the schools with respect to the unemployed youth.

TO anyone who is genuinely interested in youth, a most disturbing feature of the depression period has been the large number of capable young people whose ambitions and plans have been so cruelly frustrated. Every reader of these lines knows of many cases of this sort. The writer is thinking at the moment of high school and college graduates in every city and town, as well as of those less fortunate youths without a high school education who have been unable either to find employment of any kind or to continue their education; of two young women, one a graduate in education and the other in law, who are now earning a meager living for themselves and dependent relatives as saleswomen in a chain store; of an automotive engineer and an architect, both recent graduates, who are greasing automobiles in the same service station; and of a teacher and an electrical engineer who, each after a brief period of experience in his profession, are, with wife and babies, now living with hard-pressed farmer fathers. A recent study in one of the larger cities showed that one year after graduation more than 30 per cent of the high school graduates of the entire city were neither employed in any way nor were attending an educational institution.

Consideration need not be given here to the causes of this situation or to the psychological effects of such experiences on the individuals concerned, or to the social dangers involved. The question that challenges attention is: What can be done at the present time to ameliorate these effects and reduce these dangers? Nor is the question answered by stating the obvious fact that it is society's business to remedy conditions which are responsible for the situation. Changing the conditions that bring on distressing unemployment like that of the past few years is a long process at best, and these young people need help now.

What kind of help do they need? They need help in keeping up their morale, in making further preparation for better days ahead, in understanding better the conditions that have cheated them out of their expected heritage of opportunities, in doing their part in the efforts of society to lighten the harmful effects of present conditions and to bring about better conditions—help, if you please, in finding some sweetness in the uses of the bitter adversity that has come upon them. In serving these needs a four-part program is required:

1. A program that provides for general education with attention to civic, social, and economic questions as well as to cultural interests. To be sure, individual differences determine individual needs in these respects, especially in the matter of cultural interests. But all of the young people under consideration should give syste-

matic and sustained effort under able leadership toward a better understanding of fundamental social and economic principles and forces that affect present conditions. And the fact that they themselves are so seriously affected by these conditions gives powerful motivation to such study.

2. A program that provides for further preparation for a suitable vocation. Here again, individual needs differ greatly. Some of the young people concerned have made no special preparation for any particular vocation. Others have completed the preparation provided by high-grade professional schools. The former will find it advantageous in the long run to use some of their time in selecting and getting ready for specific fields of work. The latter will need to keep their preparation up to date and to add to its thoroughness and completeness.

3. A program that provides for building up a wholesome recreational life. As a means of keeping up morale during unemployment, recreation is generally recognized as holding great possibilities. It is recognized also, that recreation must have a larger place in the increased leisure that is resulting from reduction of working hours. But not all kinds of recreation are equally wholesome. Among those that are recognized as wholesome not all are equally suitable for a given individual. Often the environment of a desirable recreation is bad. Often, also, there is a tendency to use an undue part of one's time in a single kind of recreation. In every community each young person, especially if unemployed, needs help in working out plans for his recreational activities and in carrying out these plans.

4. A program that provides for developing the habit of participating wisely and effectively in community service activities. Part of every individual's time not occupied in earning a living should be devoted to unpaid service of his community. This applies with double force to the unemployed. Those engaged in worthwhile occupations are already serving society through their work. Too often the use of leisure time is discussed only in terms of self-improvement or recreational activities. But all owe it to themselves as well as to society to devote part of their time to voluntary, unpaid community service. Service of this character is rendered within the family circle, through the church, Y. M. C. A., Y. W. C. A., Boy Scouts, Girl Scouts, Girl Reserves, Red Cross, dramatic clubs, in recreational leadership, by means of community improvement associations, and in other ways.

From this analysis it appears that what these young people need is not instruction so much as help in thinking over and deciding on present and future plans for their own lives along educational, vocational, recreational, and community service lines in this topsy-turvy world—plans, to be sure, that are based on study of things as they are. They need help in gathering information concerning opportunities and requirements along all of these lines and in evaluating this information in relation to their own qualities and characteristics, rather than to be given this information and told how to use it. They need a chance, under wise leadership, not only to discuss and to plan, but also to carry their plans into action. Such a combination of study, planning, and action along these lines by this group of young people holds

tremendous possibilities, not only for them but also for the communities of which they are members.

How can a program of this kind be set in motion in a community? It can and should be set in motion as part of the community's educational program, under the leadership of society's chosen educational agency, the public school system, with the coöperation of the local relief agency.

With the Federal government spending such vast sums on relief and with emphasis on *work* relief rather than the dole, here is a project with great possibilities. Let a substantial amount of this money be assigned to a program for unemployed youth, 16 to 25 years of age. Employ a competent local director of the program in each community. Provide him with a selected staff of FERA helpers as teachers are now provided for FERA schools. Authorize him to recruit voluntary helpers also. Arrange for unemployed youth who wish to participate in the program to be paid 30 or 40 cents an hour for 10 hours of work per week. Start with a selected group of moderate size and expand gradually until all who wish to participate are included in the program. Let the work be limited to *community service* projects that will not result in loss of employment opportunities for adults. Make the first project a survey of unemployed youth in the community in accordance with a plan of national scope, and build the program as a whole on the results of this survey. Survey recreational opportunities and needs, making a list of practicable things to be done in order to improve recreational facilities. Survey community service opportunities and needs, making a similar list of things that need to be done for the improvement of community life. With the assistance of the youth who participate in the program decide upon certain projects to be undertaken and assign youth to them, as far as possible in accordance with their abilities and interests. Make it clear that the director and his staff will assist those who come into the program to obtain suitable full-time employment as soon as possible. Keep records of the activities of each youth as a basis for recommendation for full-time employment.

Provide that all who participate in the work program should spend a fixed number of hours per week, not less than 20, in an educational, recreational and unpaid community service program determined in accordance with individual needs and abilities. Vocational education, preceded by vocational guidance, should be a part of this program. General education of a cultural type for some and of a type growing out of and related to their ten hours of work and to current conditions for all would also form a part. Voluntary community service of types that could not properly be brought into the work program should likewise be included, as would also physical and social recreation.

The youth participating in the program might be divided into groups or clubs for these varied activities, according to their interests and abilities, with the more capable and mature youth serving their ten hours per week as leaders of these clubs. School buildings, after regular school hours, could be used for both the educational and recreational activities.

Provision for individual counseling

would be necessary, and for bringing together records on which to base this counseling. Indeed, counseling in its best sense, in the sense of helping each individual to gather, weigh, and evaluate significant facts before reaching a decision, should permeate the whole program.

It is quite possible that the time is not far distant when public schools will be made responsible by law for the activities of youth until regular employment begins, whether that be at 16 or 25 years of age. Something must be done for them between full-time school and full-time employment. They cannot be placed in cold storage until employers want them. In the meantime, pending legal provision that the schools shall assume this responsibility, unemployed youth constitute a challenge and a threat that society, and especially school principals who are custodians of society's chosen agency for education, cannot afford to ignore. General approval is given the human salvaging work of the CCC camps. Certainly the group considered here, made up of both sexes, is no less worthy of consideration. Certainly, also, the program proposed here, carried on in the communities to which they belong and contributing directly to the immediate improvement of those communities, should be no less effective in fitting youth for community life nor in contributing to social welfare.

CONTRIBUTION OF VOCATIONAL EDUCATION TO THE RELIEF OF UNEMPLOYMENT

J. C. WRIGHT

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UNITED STATES OFFICE OF EDUCATION

Dr. Wright has presented a most encouraging account of the contributions of vocational education to the relief of unemployment. No one is in a better position to know exactly how much is being done by vocational education agencies in this important work.

INSECURITY of job-tenure and unemployment, together with the continuing fear of unemployment among our workers, are being recognized for what they are—prime evils of our present economic order. It is being realized that our economic order, which is admittedly one of potential increasing abundance for all, has developed, along with its capacity to produce more abundantly, alarming qualities of instability, of recurrent far-reaching maladjustment, and of occasional "dead-centering" of the productive mechanism. These characteristics mean unemployment and go far to neutralize the material benefits of increased productive capacity. Unemployment has become today a dominant economic, social, and political world problem. It has become apparent in recent experience the world over that no regime—political, social, or economic—which fails to solve this problem can long survive. Many regimes have already "met their Waterloo" in unemployment.

We must nevertheless assume that the problem in our country can be solved, and if we have faith in our American institutions, we must assume that the problem can be solved under the pattern of our democracy. I believe that it can and will be so solved, and that our national program of vocational education has a real responsibility in contributing to its solution.

At the time of the institution of this program in 1917, and for some years following, unemployment in this country was at the minimum level. The period of the war and early postwar years was one of feverish activity in industry, commerce, and agriculture—a period during which the demand for labor in every line of employment seemed to be in excess of the available supply of labor. In such a period, vocational education functions principally as a program for increasing the efficiency of labor in employment rather than of relieving unemployment.

It should not be necessary to add that in any period there is much unemployment which vocational education cannot prevent. It cannot prevent the machine from taking over the job of the worker. It cannot prevent the introduction of new products and industries which supplant old products and industries, and on occasion throw large groups of labor into the discard of unemployment. It cannot prevent seasonal slumps in the demand for labor in certain industries, nor the recurrence of periods of depression. It cannot and it would not prevent the march of invention and science in perfecting new ways of utilizing mechan-

ical power in place of man-power, which in one of its aspects is a continuous process of throwing workers, at least temporarily, into the discard of unemployment.

It cannot prevent these things, and it may be added that although in our economic order the consequences of economic insecurity have been devastating, we have nevertheless preferred this insecurity and the responsibilities which it implies to any security which must have been purchased at the price of stopping the marvelous progress of science and invention in devising more economical ways of doing the world's work. Our problem, as we have conceived it, is not to promote economic security by stopping this marvelous progress, but rather to foster science, invention, and technological advance, and deal with the consequent occupational insecurity of the worker directly, and it is in dealing with this problem of insecurity directly that vocational education must function and is functioning today as one important social agency.

The appalling condition of unemployment, which has in the brief period of five years reduced a very large proportion, some 19,000,000, of our population to a condition of dependency upon public relief, has presented a real challenge to vocational education to justify the faith of those who believe that *training for work is one effective way of dealing with unemployment.* In this continuing situation of unemployment, reports to the Office of Education for several years past, more particularly for the past year, have given detailed accounts of services being rendered in the States by State and local vocational staffs with the immediate objective of relieving unemployment.

On a review of these services being rendered in thousands of communities, it becomes apparent that vocational education has accepted the challenge of the most appalling situation that has developed in our history and is contributing materially to the relief of unemployment in every section of the country. I cannot in these few paragraphs present these services in detail. They are on record in the files of the Vocational Division of the Office of Education. Here I can indicate only the broad general character of the services. Vocational education is today functioning for the relief of unemployment:

By training the unemployed worker *back into employment.*

It is found that in many thousands of instances the worker unemployed today is a worker who needs training in the new technics of some available job. Without the training the worker cannot qualify for the job, and must remain unemployed.

By providing occupational adjustment training *to keep the unemployed worker employed.*

In 1934, 100,000 adult farmers, 140,000 trade and industrial workers, and 129,000 women in the home were enrolled in evening classes for instruction along the lines of their daily employment, to keep them occupationally adjusted in a rapidly changing work environment. Occupational unadjustment or maladjustment is a prevalent cause of unemployment.

By administering apprentice training for the *unemployed boy or girl.*

While apprentice training has been provided locally under the vocational program since 1917, a national program of apprentice training has been made possible for the first time in our history under the President's Executive Order

of June 27, 1934. Agencies representative of employers, labor, and vocational education have been organized for administering this program in the States generally.

By *enrolling the unemployed worker* in regular vocational courses.

During the past year unemployed workers have been extensively enrolled in regular vocational courses, the proportion of unemployed in such courses varying from community to community, and from State to State, ranging as high as 30 or more per cent for certain types of classes.

By organizing *special vocational courses for the unemployed.*

By *finding a job* for the unemployed worker.

By training and employing unemployed workers as *teachers of vocational courses for the unemployed.*

By protecting the occupational morale of *unemployed workers during unemployment.*

Vocational schools, to use a phrase of one State Director, are functioning as "life-saving stations" for unemployed workers in safeguarding their occupational morale and preventing them from becoming permanently unemployable.

By promoting *agricultural adjustment* of the maladjusted farmer.

The 5,000 teachers of vocational agriculture have organized courses and worked with individual farmers in every section of the country to give effect to the Federal programs of agricultural adjustment, production control, soil erosion control, homestead farming, and farm financing.

By safeguarding the *health, morale, and welfare of the unemployed worker's family.*

Vocational teachers of home economics, numbering over 6,000, have conducted surveys of families of enemployed workers, and provided instruction to safeguard the family health, morale, and welfare during the period of unemployment and of consequent reduction of family incomes.

By educating the *homemaker as a buyer-consumer* for the family.

The homemaker spends annually some billions of dollars buying a living for the family. Consumer education for her has become a dominant feature of home economics education in the present emergency of reduced family resources.

By organizing *live-at-home programs* for rural families.

Teachers of vocational agriculture and home economics have co-operated in developing budgets of family needs for food and in planning and planting home gardens to meet these needs.

By teaching the homemaker to *make over rather than buy new.*

By vocationally *rehabilitating the physically disabled unemployed.*

In 1934 over 8,000 permanently disabled and generally unemployed dependent workers were vocationally rehabilitated and placed in employment under the Federal-State rehabilitation program.

By coöperating with agencies of public and private *relief.*

Vocational classes in many communities have, for example, taken as "class projects" the canning of surplus food for distribution to families on relief.

By coöperating extensively with transient bureaus and CCC Camps for *unadjusted youth,* with subsistence homestead communities, and with rural rehabilitation and adult education agencies.

On a review of these services reported by the States, it becomes apparent that they vary in character, according as they deal directly with the *worker out of a job,* or with the demoralizing *consequences of unemployment* in the worker's home, or with the *maladjustments experienced indirectly* by large groups of workers who may not themselves be unemployed.

For the unemployed worker in industrial and commercial fields, the training service required must have as its immediate objective bringing the unemployed worker back into employment. Neither the farmer nor the homemaker, however, is unemployed in any period, as the industrial or commercial worker may be. In a period of economic depression, loss of profitable markets, falling prices, and shifting demands for farm products, the farmer needs help, not to enable him to secure employment, but rather to enable him to adjust his operations in the emergency situation. The homemaker, also, needs help, not as one of the unemployed—since her responsibilities increase rather than diminish in any period of economic insecurity—but rather to enable her to safeguard the welfare of the family under conditions of reduced family income. The underlying motive of the services being rendered through vocational training in these several fields is accordingly relief in the unemployment situation *as this situation affects respectively the wage worker, the farmer, and the homemaker.*

Vocational education has worked during the past year hand in hand with all agencies which have been specifically organized to deal with different aspects of the continuing condition of industrial unemployment, of agricultural maladjustment, and of increasing tension and dependency in the home. Some of these newly established agencies represent adoption of public policies for safeguarding the economic security of the worker and his family on a *permanent basis,* rather than on simply an emergency basis, and in these cases the coöperation of vocational training agencies also is on a permanent basis, representing *permanent modifications and expansions of the long-time vocational program.*

The activities reported by the States in detail reflect the coördinated effort of Federal, State and local staffs, comprising thousands of experienced administrators, supervisors, and teachers in every section of the country.

VOCATIONAL EDUCATION IN AGRICULTURE AND LIFE'S VALUES

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Dr. Nolan here presents a most inspiring plea for agricultural education as a means of cultural education.

IN these days every curriculum asking a place in the public schools is subjected to a searching scrutiny. What does it have to contribute to life's values? We shall have to state some of the generally accepted values of life, before we can proceed further with this discussion.

There are the economic values, dealing with the production, consumption, and conservation of goods, and with the earning, spending and saving of money. There are the physical values, concerned with the body and its health. There are the recreational values, recognized everywhere as indispensible to health and happiness. There are the social values, in which people live together efficiently in various human relationships, as good citizens. There are the intellectual values, concerned primarily with knowledge, and with the acquiring of a world of ideas. There are the aesthetic values, dealing with the creation and appreciation of beauty. There are finally, the spiritual values, including attitudes of reverence toward God, and good-will toward man. Many of these values overlap, and are often described in other terms. They will be more fully treated in the various sections of this article as Agricultural Education is brought into relation with them. An educated man is one alive to all true values.

We now raise the question again, "What has vocational education in agriculture to offer to life's values?" But first we must define vocational education in agriculture. This has been well done by a committee of the National Education Association: "Vocational education in agriculture, (a) gives the skill and the knowledge necessary to the control of plant and animal production, to the end of economic profit, and (b) is so articulated with other education as to promote the most desirable farm community life." The Smith-Hughes National Vocational Education Act says: "The purpose of such education is to fit for useful employment, for those who have entered upon, or who are preparing to enter upon, the work of the farm, or of the farm home."

In this discussion we shall consider education in agriculture to include the work in nature-study, elementary agriculture in the public schools and in 4-H Club work, vocational agriculture in secondary schools, agriculture of collegiate grade, educational work in agriculture as carried on by farm organizations, the press, the radio, and all other agencies contributing to the education of the farmer in technical agriculture and its related subjects.

I. ECONOMIC VALUES

Since agriculture deals almost wholly with things having economic

value, it is evident to all that education in vocational agriculture makes direct and positive contributions to economic values. The report of the state supervisor of agricultural education in Illinois for the year ending June 30, 1934, is an excellent example of the truth of the above statement. The net earnings of the projects of the farm boys studying agriculture in the high schools of the state for last year, was about $240,000. The total reimbursement from Federal and State taxes for this form of education was about $179,000. Here is a clear case of economic gain from an investment in agricultural education. The whole program of agricultural education deals with the scientific production, conservation, and distribution of agricultural resources, to the end of economic gain. An era lies just ahead, in which the natural sciences, especially Chemistry, will make possible a greater use of the organic raw materials of the farm in the industries. For that new day of agriculture, in which unheard-of economic values will appear, more education in agriculture and the related sciences will be the demand of the people.

It should be shown that all true education is an economic asset. Educated people require higher standards of living, this calls for the consumption of more goods, and this in turn stimulates business. Vocational education not only creates higher ideals and standards of living, but at the same time enables the beneficiaries of such education to create, with their own hands, the standards of living they desire. Agricultural education directly teaches how to earn, how to spend wisely, and how to save money. Through this type of education lies economic security for millions of our people.

II. Physical Values

For a half a century or more, the teaching of physiology and such hygiene as accompanied it in the elementary rural schools had little effect upon the health and sanitation of rural life. It was not effectively related to life. Consequently we have such survey reports that the health in the open country is not up to the standard of that of the city. But with the introduction of agriculture into the curriculums of the rural schools, early in the present century, an improved situation in health and sanitation among the people is noted. This is not a coincidence either. There is, and has been, a definite contribution to rural health through the study of scientific agriculture. Labor-saving machinery has lifted health-destroying burdens from the backs of the farmer and his wife. Sanitary house construction and equipment, a branch of agriculture, has added more healthful environments. When the farmer learns that cleanliness, sunshine, and other good sanitary measures are good for his cows, pigs, and poultry, it is an easy carry-over to provide these things for his home and family. When he learns in agriculture that a balanced ration is necessary for the health of his livestock, he must surely know that the same biological laws apply to human beings. Scientific agriculture makes for greater prosperity, and with this comes the ability and the desire on the part of the farmer to provide for the good health of his household. The fact that insurance companies accept the vocation of farming as a

high-class risk merely confirms what is common knowledge, that life and work in the agricultural pursuits are conducive to physical health and well-being. Education in agriculture enhances this value.

III. Recreational Values

As has been shown, education in agriculture brings to the vocational economic values. With better economic conditions, the farmer is in a position to purchase or to provide home-made recreation for himself and family. Under improved agricultural conditions the farmer has more leisure time in which to enjoy recreation, furthermore, the work of scientific agriculture, in itself, is a pleasure.

Wherever and whenever agricultural education is carried on, whether in school or among farmers, there soon appear recreational activities. Fairs, picnics, tours, dramatics, concerts, banquets, athletic contests, are among the recreational activities sponsored by 4-H Clubs, Future Farmers of America, Farm and Home Bureaus, Granges and other agricultural groups. The primary interest of these groups is agricultural education, but naturally their relationships and progress lead to recreational activities. Agricultural education has lead to the re-creation of rural life and brought to the farmer and his family a greater enjoyment than they ever had under older systems of education and farming.

IV. Social Values

Recreational values, discussed in the foregoing paragraph, carry certain evident social values as well. The first essential of scientific agriculture in farming is the organization and cooperation of the farmer for improved practice and business. Education in agriculture leads directly into cooperation for buying and selling of the farmers' goods. Herein lies the gaining and exercising of social values. There must be getting together, giving and taking, and getting along successfully with people. Through the New Deal in agriculture with its controlled production and necessary cooperation, such education in agriculture must be provided. Agricultural education on all levels has brought the people of the country together, working intelligently to improve conditions in the home, in the school, in politics, and in the church, as well as in the economic improvement of the vocation.

V. Intellectual Values

One of the best concepts of education is the idea of "growing." This is the ideal of all life. The study of agriculture deals largely with living and growing things. The farmer, living intelligently among growing things, cannot himself escape growing, thus obtaining intellectual values. There is more to learn, from "the clods in the valley to the cattle on a thousand hills" in agriculture than the best minds can ever compass. Agricultural education is not a narrowing culture. It leads the student into Chemistry, Physics, Biology, Geology, Sociology, Economics, Business, Mechanics, Pathology, Art, Law, and Political Science. Education in Agriculture has opened the door to ever-widening vistas of learning and culture, for thousands of men and boys, who never would have profited by the rich intellectual values of life, in this or other fields. Subject-matter has educational value when it relates to life's problems. It is evident that

the subject-matter of vocational agriculture does relate to life's problems. Subject-matter deals with the creature-comforts of man, his food, clothing, and shelter; his physical environment and its control; and his use of all these related interests in creating for himself a satisfying life. Herein lies true educational value.

VI. Aesthetic Values

Human response to life with its colors, sounds, designs and activities is natural. To appreciate an adequate expression of human emotion is to enjoy the beauty of art. Herein lies a great source of happiness. Rural life is entitled to this value, and one way of securing it is through agricultural education. The art of landscape gardening, taught in agricultural courses, provides this aesthetic value. "To be able to produce and to appreciate any one form of art will lead to a greater appreciation of all other arts, and thus open an avenue to larger joys in living."[1]

A well-kept farm, with good architecture at the homestead, and good livestock grazing in the pastures, adds beauty to the landscape, and contributes to the aesthetic culture of the farmer and his family. When scientific agriculture results in greater economy of time and means, then men and women will have more heart and ability to produce and appreciate, not only the landscape art, but other fine arts, such as music, painting, architecture and literature.

VII. Spiritual Values

Spiritual values in human life refer to the emotions of love and good-will toward God and man. A constructive spiritual philosophy teaches a purposeful universe and social justice. There is chaos in a life that does not have such philosophy. Now education in agriculture has contributions to make to these spiritual values. Living intelligently as the scientific farmer does, amidst the natural forces of the Universe, he develops a reverence for God. From the shepherds on the Judean hills to the modern farmers of the twentieth century, agriculture has always looked up toward the heavens, as well as down toward the soil.

"The conservation of all things of real worth, whether material or spiritual, is possible only when the moral standards of men are high and progressive. There can be no permanent agriculture without the spirit of Christendom, as there can be no Christendom without a permanent agriculture."[2] Good teaching of agriculture results in a spirit of service for the common good. Such ideals as permanent soil fertility, improved plants and animals, preserved forests, better roads and rural institutions, for the benefit, not only of the present generation, but for the future as well, grow out of agricultural education, and these are of spiritual value in social welfare. No small factor contributing to the moral training of farm youth is the work of caring for plants and animals, and the association with life and its realities in the open country. Furthermore, education in agriculture teaches good sportsmanship in square dealing with our fellow men.

Any subject contributing so much to life's values, as agriculture in its various branches, surely merits a welcome place among the curriculums of our public schools.

1 "The Teaching of Agriculture," Nolan, Houghton Mifflin Company.
2 Ibid.

EFFECTIVE TYPES OF VOCATIONAL AGRICULTURE IN THE SCHOOLS

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Dr. Davis has presented an interesting account of the different phases of the program of agricultural education in the public schools. This account will be found instructive to the teacher of academic subjects as well as to the specialist in agricultural education.

A COMPREHENSIVE view of the four types of organized classes, used more or less by all of the 5,000 high schools in America which are supporting departments of vocational agriculture, should be of interest to educators in general.

All administrators should understand, cooperate with, and support vocational departments when in their schools as they do other departments. They should desire to know state and federal regulations so as to reap the intended benefits. They should grasp the philosophy of education and determine the place of vocational education in the curriculum. They should interpret educational objectives to school boards and patrons. In many cases they need to correlate and unify the school by causing the different departments to harmonize with each other more closely. Principals should insist that all state and federal agencies send copies of official communications to them rather than to vocational teachers directly. This should make the school the recipient of state and federal recognition and support rather than one department. A school spirit rather than a departmental spirit will be fostered.

Four Types Defined

All-day classes are usually composed of young men from fourteen to eighteen years of age who are in regular high school attendance. In some few cases girls are admitted to these classes in vocational agriculture. In the Mississippi consolidated rural high schools only three years of vocational agriculture are offered. In most other schools in America four years of vocational agriculture are offered. Usually one year of credit is allowed for one year of work. But in a few states, because of the home practice work (farm projects), as much as one and one-half units of credit are allowed for each year of work.

The second most popular type of class in vocational agriculture is made up of adult farmers of the community, pursuing conference classes for twelve or fifteen lessons each winter and carrying out farm projects to incorporate improved farming practices, particularly in the unit of agriculture upon which the conferences are based. The farm projects run throughout the year at least, and many continue for a number of years. About 90,000 farmers, mostly men, have been enrolled in the evening classes of America each year recently.

Part-time classes are made up of boys, fourteen to twenty-one years of age, who desire to pursue farming for a livelihood and who are out of school. They are sometimes called the "forgotten" group of boys. About 12,000

or 13,000 boys have been enrolled in these classes each year recently. They form high school groups for a period of six to twelve weeks, usually during the winter season when farm work is least urgent, and each pursues a continuous farm project supervised by the instructor.

Day-unit classes are of two types: (a) over-aged boys of the seventh and eighth grades who are in the school system or in rural schools nearby. These pursue a unit course in agriculture to suit the season of the year and conduct home projects on their home farms. These are taught by the teacher of vocational agriculture in the nearby high school who meets them from one to five periods per week, depending upon conditions and schedule. (b) Boys, and perhaps girls, of the sixth, seventh, and eighth grades or possibly only the two upper grades of the school system and other nearby schools. These are taught by the grade teachers who are coached by the agricultural teacher of the high school. Home projects are supervised usually by the county agent and by the teacher of vocational agriculture. The students are usually members of the 4-H Club, and pursue home projects.

Features of the All-day Type of Instruction

The chief aims and objectives in vocational agriculture with this group of students are to develop in our future farmers who are also our future rural citizens (a) determinations and (b) abilities to become better farmers and better rural citizens.

The Future Farmers of America, a national organization of boys studying vocational agriculture, is developing desires and abilities in farm boys along lines of nine objectives, three of which are: (1) to create and nurture a love for country life; (2) to create more interest in the intelligent choice of farming occupations; (3) to strengthen the confidence of the farm boy in himself and his work. The F. F. A. creed gives visions and determinations to farm boys. All boys who study vocational agriculture are encouraged to live up to this creed.

"I believe in the future of farming, with a faith born not of words but of deeds—achievements won by the present and past generations of farmers; in the promise of better days through better ways, even as the better things we now enjoy have come up to us from the struggles of former years.

"I believe that to live and work on a good farm is pleasant, as well as challenging, for I know the joys and discomforts of farm life and hold an inborn fondness for those associations which, even in hours of discouragement, I cannot deny.

"I believe in leadership from ourselves and respect from others. I believe in my own ability to work efficiently and think clearly, with such knowledge and skill as I can secure, and in the ability of organized farmers to serve our own and the public's interest in marketing the products of our toil. I believe that we can safeguard those rights against practices and policies that are unfair.

"I believe in less dependence on begging and more power in bargaining; in the life abundant and enough honest wealth to help make it so—for others, as well as myself; in less need for charity and more of it when needed; in being happy myself and playing square with those whose happiness depends upon me.

"I believe that rural America can and will hold true to the best traditions in our national life and that I can exert an influence in my home and community which will stand solid for my choice in that inspiring task."

The motto of the F. F. A. is:

"Learning to do; doing to earn. Earning to live; living to serve."

About 100,000 high school boys are members of the F. F. A. and are striving to live up to the standards set forth above. They conduct regular chapter programs throughout the school year. They learn the duties of officers, conducting parliamentary practice, cooperating with leaders and sponsors. The chapters often undertake important community programs which train the members in leadership. The responsibility assumed by the young men in this organization is a powerful factor in causing them to pursue their school work with greater zeal and determination for success.

Courses of Study are based on the following: (1) the needed farm improvement in the community; (2) the desire of individual students to train for certain types of farming; (3) the farm management problems needed to be solved by farmers. In many high schools during the last school year the two upper classes pursued the following abilities:

1. Produce crops and livestock products according to market demands, and the adjustment program.
2. Produce the quality of farm products that are in best demand on the market.
3. Have products ready for market at the time they will sell for the highest prices.
4. Produce plenty of food and feed for home use.
5. Add fertility to the soil without commercial fertilizer.
6. Keep the soil from eroding.
7. Grade farm products so they will sell for the highest prices.
8. Produce good pastures for livestock.
9. Finance the farm business at the lowest rate of interest (Federal farm credit administration).

The usual direct aims in courses in farm management include the following ten points:

1. Select and economically secure a farm on which the owner can make a better and happier living; study community, land, tax rates, production, etc.
2. Arrange fields, pastures, and wood lands so that they will produce such a living over a period of years.
3. Locate new buildings and fences or rearrange old ones on the farm.
4. Plan and provide convenient, comfortable, attractive, and economic buildings and fences.
5. Equip the farm with economic power and machinery.
6. Select and economically secure breeding stock and field seeds that will likely pay better over a period of years.
7. Make home grounds and surroundings sanitary and attractive.
8. Select and provide conveniences in and around the home.
9. Save and economically use feed and food products that are produced on the farm.
10. Determine the economic returns from the different enterprises on the farm.

Each student accumulates property while pursuing his project. Sometimes it is in the form of land, sometimes livestock, sometimes equipment, such as buildings or devices for use in the project. Many of the latter are made in the farm shop or in the school shop while the student is pursuing a course in farm shopwork. Usually most of the equipment for the home projects is made by the student in one of these shops. Every boy and every farmer is encouraged and shown how to provide himself with a simple farm shop for repair of machinery, for becoming skilful in shop work, and for better equipment of projects.

RELATIONSHIPS BETWEEN INDUSTRIAL ARTS EDUCATION AND VOCATIONAL TRADE TRAINING

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Dr. Lewis makes very clear the relationship between industrial arts as a phase of general education and vocational industrial education. This relationship is often confusing to teachers and others interested in industrial education.

IN most modern public school systems the relationships between the work known as industrial arts and that entitled vocational industrial training are numerous and close. This article attempts briefly to explain the character of some of these relationships and to make clear why they are natural and desirable. The two kinds of work differ in their objectives. The purpose of vocational industrial training is to fit for useful employment in a specific trade or industrial occupation. Briefly stated, the generally accepted purposes of industrial arts education are apt to emphasize the contributions of the work to general education, stressing such points as that of aiding young people more intelligently to understand modern industry, providing exploratory experiences of value in guidance, and serving as preparatory courses for entrance to engineering and other technical colleges. Notwithstanding these different objectives, both types of work find their subject-matter in the same place, the industrial life of the country; many of the methods common to one are also used in the other field; equipments and supplies are largely similar in type; instructors frequently teach in both fields; and in many school systems the same official exercises supervision over both departments. The existence, therefore, of close relationships between the two kinds of work is not surprising; on the contrary, there would be occasion for surprise if industrial arts education and vocational trade training were wholly unrelated in school practice.

One of the most obvious of the relationships indicated above has to do with supervision. Research studies reveal a surprising number of different titles given to supervising officials in the fields of work under consideration, and also indicate that these individuals, whatever may be the particular title they bear, have supervisory control over *both* types of work in the majority of cities over 20,000 population in which they are employed. In the cities of greatest size throughout the country there seems to be a tendency to place all phases of practical training under an assistant superintendent, and in such places there may be a separate supervisor or director for industrial arts as well as one for vocational trade training. This practice in the larger communities is due to the volume of work to be done in each field; the schools and teachers to be served and the number of problems to be solved are far more than can be adequately cared for by one individual acting as supervisor of both kinds of work. In the smaller

city, however, one well-trained individual can very well supervise and direct both lines of school activity.

The reasons for the latter statement are more apparent when one considers the character of the various phases of work with which supervision is concerned in these fields. In both industrial arts education and vocational industrial training the development and improvement of the teaching content is a necessary supervisory activity, and in both cases subject-matter is derived from the same source, industry itself. Furthermore, the method of discovering teaching content is the same for both kinds of work—occupational analysis. Hence it is not uncommon to find that an analysis of some trade, such as electrical work or sheet-metal work, may be made by a supervisor to serve two different purposes: teaching content for a trade training course in the one case, and as a source from which to select the simpler tools, processes and materials to constitute a junior high school industrial arts course. A supervisor properly qualified for curriculum construction in one of these fields, therefore, is likewise qualified for curriculum construction in the other, and his competence is frequently used by a city superintendent by assigning him supervision of both fields of work.

It is impossible within the limits of space available here to give any adequate picture of the scope of supervisory work in the single field of the curriculum as found in industrial arts education and vocational industrial training, but an example may serve to illustrate some of the relationships involved. A supervisor will sometimes have industrial arts courses in electricity, printing, machine shop, sheet-metal, drafting, radio, bench metal-work, etc., in the junior high schools, more advanced courses in these and other subjects in the senior high schools, and various trade training courses in the trade departments of the cosmopolitan-type high schools. The latter will be designed to train pupils for subsequent employment in the occupations taught in the trade departments, but in many instances they may be taken from the same industrial fields as are some of the industrial arts courses found in the junior high schools and are apt to bear the same titles, such as electricity, printing, etc. Supervisory duties in relation to the curriculum, therefore, are bound to bear a close relation to each other in industrial arts and in industrial trade training, and account in part for the frequent practice of placing both types of work under the same supervisor.

There are other phases of relationship between our two fields of work aside from those involving supervision and the curriculum. One of these has to do with teachers who in smaller school systems are often utilized to teach industrial arts classes and vocational trade classes conducted in the same high school. Thus a man may devote half a day to a trade class in electricity, printing, or some other trade subject, and the other half-day to industrial arts classes in the same subject. Combinations of this kind in many cases may be highly desirable and may enable a school to offer a wider variety of trade courses than would be possible if the entire time of the teacher had to be utilized in trade classes only. The same is true

for equipment: a school shop equipped for a trade class may be used by the trade group for three hours every day and may be occupied by industrial arts classes in the same subject the remainder of the time. The tools, machines and supplies serve both groups equally well, although the industrial arts classes do not have the same objectives as the trade group, do not engage in shop work for the same number of hours per week, and are not apt to undertake so much repetitive skill training or to go so deeply into the technicality of the occupation as does the trade group. This possible utilization under certain circumstances of the same teachers, floor space, and equipment is significant as an indication of the close relationship which may exist between industrial arts and vocational industrial training departments in the same school system.

Two additional relationships are likewise extremely important in connection with the types of work under consideration: one concerns the matter of methods of instruction and the other the problem of guidance. As has been indicated, both industrial arts and vocational industrial training involve the use of the tools, machines, materials, processes, and products of industrial occupations. The differences between the two are more nearly a matter of the scope and intensiveness of the training than its inherent character. It is to be expected, therefore, that in many particulars the methods of instruction in the two fields will be similar. This proves to be the case; these two types of work have much to contribute to each other in regard to problems of shop administration and instructional methods. Safety control, shop management, tool control systems, shop records and reports, measurement of achievement, pupil-foremen schemes, stock control, job instruction sheets, information sheets, assignment sheets, systems for requisitioning and accounting for supplies, as well as more obvious teaching methods and devices found particularly effective in one field are frequently transferred immediately to the other field. Supervisors are constantly on the lookout for improved procedures in both phases of training and the entire program often benefits throughout the city because some one teacher has found a better way of doing some part of his work than was known before. In shop administration and methods of instruction, therefore, the relationships between industrial arts and vocational industrial training are numerous and important, so much so that an improvement in one field is generally capitalized immediately in the other, thus justifying the closest correlation between the teaching and supervisory personnel in the two fields.

Elements of guidance are involved in nearly all subjects of the junior high and high school curricula. Pupils are apt to approve and take advanced courses in the subjects they like and to disapprove and discontinue further study of the subjects they dislike. This is especially true in the industrial arts field and may lead to vocational selection and training for a life occupation. A boy who takes industrial arts in the junior high school and likes the work, may by this "exploration of his interests, aptitudes and capacities" be led to study some specific trade course in the senior

high school; or he may be induced to take advanced industrial arts courses as preparation for entrance to an engineering or other technical college; or he may simply decide to take advanced industrial arts courses because he likes work of that character and deems it as satisfactory preparation for his probable future as some of the alternative subjects open to his election in high school. On the other hand, the guidance effects of the industrial arts courses in the junior high school may be negative with other pupils, and may enable them to discover that they are not adapted to industrial activities of that nature. In either case the work has contributed guidance of value to the pupil. Industrial arts courses thus have a close relationship to vocational trade-training programs: they enable individuals fitted for industrial pursuits to "find themselves"; they tend to keep out those unfitted for such activities; and they give an intelligent basis for the selection of advanced courses in the same field of subject-matter when the individual has no desire to enter the field as a vocational worker. So far as the day trade school or department is concerned, then, its selective agency for securing students is apt to be the industrial arts work of the junior high schools. The two departments, therefore, should have close working relationships so that they may consider together the problems of guidance, indications of vocational ability, placements for cooperative training and apprentice training programs, success of industrial arts students when taking vocational trade training programs, the subsequent vocational success of trade department graduates, and all other phases of guidance and vocational preparation which enable the modern school to serve effectively all pupils who come to its doors.

This brief discussion of the relationships existing between industrial arts education and vocational industrial training obviously is intended for those not familiar with the fields of work named. It has attempted to set forth in brief compass some of the more fundamental relationships arising from similar subject-matter used to accomplish different objectives in the two fields. These relationships affect especially the matters of supervision, curriculum construction, teachers, floor space and equipment, shop administration and methods of instruction, and both vocational and educational guidance.

SELLING THE PRODUCTS OF VOCATIONAL EDUCATION

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Mr. Day, as an experienced executive in a large city school system, is peculiarly well fitted to discuss the important subject of fitting youth for the employment market. This very careful analysis will be highly suggestive to those whose business is to prepare boys and girls for employment.

WE seem to be rather generally agreed on the objectives of education although our method of stating them varies considerably. We are attempting through the agency of our public schools to help people adjust themselves from one state of living to another which is more advanced. For the school child this frequently takes on the form of preparing for some definite activity as well as those more intangible values known as culture, citizenship and character training. Each branch of our educational service has certain specific objectives which contribute to the realization of the general plan. Vocational education is no exception to this rule. It is one of the elements of our great program of education and its specific objective is to prepare for citizenship, culture and character by training people for profitable employment. This training extends from the time a child becomes fourteen years of age and is capable of profiting by vocational training through old age.

Vocational education has been defined in the Federal Vocational Education Law, commonly referred to as the Smith-Hughes Law, as "any education the controlling purpose of which is to fit people for profitable employment." Thus vocational education in its broader sense includes all types of work training. For purposes of this discussion we shall limit the field of vocational education to what is commonly referred to as trade training or training in the skilled or semi-skilled crafts and occupations.

Vocational training for the trades and crafts may be likened in many ways to a manufacturing industry. In the process of manufacturing, materials known as "raw material" are brought into the manufacturing plant from an outside source. During the manufacturing process certain changes are brought about in this raw material, either in composition, in form or both. The product is then marketed. It also follows that the finished product of one manufacturing process may become the raw material of another manufacturing process. For example, steel rods are the finished product of certain of the steel manufacturing processes. These same steel rods become the raw material in the manufacturing of drills, files, bolts and a multitude of other products. However, the complete cycle of manufacturing of any product is not finished when the manufacturing processes are ended. No industry can continue in operation which does not have adequate, effective working plans for getting the product in use by the consumer for whom the manufacturing

was done. In other words, to the manufacturing process must be added selling of the product.

Vocational education or vocational training is very similar to the manufacturing industry in that we take into our vocational schools or classes raw material which is the student or learner. This raw material may be the finished product of the elementary school, the high school or perhaps some phase of industrial life. On this raw material we make certain planned changes during which we train the student in the trade, craft or occupation of his choice. We teach him necessary skills, knowledge, habits and attitudes and turn him out representing our finished product. It is a regrettable fact that frequently the schools have considered their task completed when the training period was over. We have done this training more or less effectively and have taken the product to the door of the training school and bade them goodbye with a hearty wish of "Good luck and God bless you." We then turn back into the school, wipe our pedagogical hands clean of the group just gone and feel we are ready to start in with the next group with the firm conviction we have done our duty.

A reasonably careful study of this situation seems to reveal its absurdity. If an industrial organization which produces certain products cannot continue without definite plans for marketing its product how can vocational schools, producing the more vital and valuable human product, expect to continue holding the support of the public unless they likewise develop and carry out effective means of getting their human product to the consumer which, in this case, is the employer?

There are several elements in successful selling of a manufactured product. It is first essential that the product be well manufactured so that it will efficiently perform the service for which it is produced. No successful manufacturer who is jealous of his reputation will permit a product to go through his factory for which he must make apologies or which will require constant adjustment. It is also increasingly evident it is most desirable to have a reputable organization with high ethical standards of business to stand back of the product, thus lending to the product the prestige built up by past service. While it is generally recognized that the name of a firm alone is insufficient to sell its product it is equally evident that the backing of such a firm adds to the ease with which a product may be sold and helps to pave the way to new territory. However, a well manufactured article backed by a strong reputable organization is still insufficient. The firm must have working relationships with many consumers who know of the worth of the product and who need to use it. These consumers constitute the potential market and manufacturing concerns spend large sums of money in developing these consumer contacts. All sorts of advertising and goodwill propaganda are used and the contact with each present or potential consumer is jealously guarded so that nothing will interfere with the smooth relationships existing. This condition does not come about without great effort.

The situation with vocational training schools and classes is almost iden-

tical to that discussed above. If the product of the vocational schools is to find a ready market he must be well "produced" or well "manufactured." The training which he receives must be practical and so designed as to enable the trainee to go into industry and perform a service to the entire satisfaction of the employer. There is no more reason for turning out of the vocational schools poorly or inadequately trained workers and expecting them to find a ready market for service than there would be to turn out any manufactured product which would not render satisfactory and continuous service. This means that the material which is taught to a learner must be kept up-to-date and in step with the processes used in industry; also that the material must be organized so that the learner will be able to absorb the most in the least time. It must be so taught that the learning process is a more or less natural one and the school providing some opportunity either within its own organization or in cooperation with industry, in what is known as cooperative courses, for the student to get some actual work practise under work conditions. As in industry, so in education, the school must build a reputation as an organization which will vouch for its product. It must guard this reputation as jealously as industrial concerns guard their trade names. The school must take the initiative in contacting employers and in making all necessary adjustments which affect the initial work relations of its product, namely, the student. The school must have some form of marketing division or sales department the same as any industry. It is absurd to expect that the schools can continue to turn out a human product more or less effectively trained and expect them to be absorbed efficiently in industry unless the school goes with the trainee and helps him to make at least the first contact. These contacts have to do with type of work and opportunities for advancement and not with matters of direct employer-employee relationships, such as wages, attitude toward organized labor and the like. The latter items must be left in the hands of the employer and trainee.

A number of ways whereby these thoughts can be carried into execution have been developed and used with more or less success. However, there is no panacea and each vocational school should develop plans best suited to the needs of that community. Therefore, the following suggestions are merely typical of what may be done:

First, the school may maintain a direct employment service through an employment bureau or an employment agent. This agency acts as a clearing house for all calls for employment and has as a part of its task going out into industry and uncovering new opportunities for employment of the student whom the organization can recommend.

Second, since the teachers in vocational schools are themselves skilled tradesmen in their line of work they have, or should have, many contacts through which they can place students in employment. In some school organizations a definite time is set aside for each teacher to do this work. Teachers of vocational schools are expected to keep in constant touch with industry for two reasons: (1) so they may keep themselves up-to-date in their trade knowledge and skills; (2) so they may promote opportunities for the placement of their students.

Third, it has been found very prac-

tical to organize what is known as cooperative training classes whereby the student who has had some basic training in his trade or craft, either in a vocational school or elsewhere, spends a part of his time actually working on the job and the remainder in school receiving instruction supplemental to the employment. In most cases the student spends approximately half of his time in work and half in school. The advantages of this type of cooperation are evident. The boy is getting first-hand experience and the employer is having the opportunity not only to size up the young worker to determine his suitability before making him a permanent part of his organization for he likewise has the chance to have a hand in his school training. In most cases where the work of the student is reasonably satisfactory he is assured of a full-time job when he has completed his cooperative course. Another very fine point in this arrangement is the close cooperation and understanding that is developed between a vocational school and industry.

Fourth, oftentimes opportunities for placement of the product of vocational classes may develop through various training courses given in industry, such as foreman conferences, night school classes, special part-time classes and the like.

Fifth, many valuable contacts and relationships are built up in small communities by the leaders in vocational education participating in community affairs. In community work the vocational education leader gains the respect and confidence of many people in industry and business who because of their personal confidence in him will accept the product of the vocational school.

Sixth, perhaps the most lasting and most beneficial method of all is the steady continuous effort in making a new contact here, placing a well-trained boy there, and over a long period of time developing in the community a confidence in the vocational training program which causes the employers to turn naturally to the vocational school when in need of workers. Flashy programs of promotion, accompanied by noisy ballyhoo, sound good, make big news stories and frequently result in adding large numbers to a vocational school enrollment, but these efforts seldom last. One young man or woman who has been carefully trained in a vocational school and who makes an outstanding service record in his chosen trade or craft is the best advertisement the vocational school can have. Likewise, where a man now engaged in industry has increased his efficiency through some extension training he has received, perhaps at night in a vocational school, he becomes an enthusiastic booster and probably will result in additional opportunities for other workers trained in the same institution.

All of this leads to perhaps one summary statement, namely, it is no more reasonable to expect to continue training workers in vocational schools for definite places in industry without an adequate program for marketing their services than it is to expect a manufacturer to be able to continue manufacturing automobiles which he will take to the factory doors hoping for a chance buyer to come along and absorb his product. Business is not conducted that way. Vocational schools must market their human product.

THE CONTRIBUTION OF VOCATIONAL EDUCATION TO SOCIAL AND ECONOMIC ADJUSTMENT

L. H. Dennis

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Dr. Dennis points out that the very greatly increased enrollment in the secondary school should mean an equal expansion and diversification in the curriculum if the high school is to function as a democratic institution.

THE recent national survey of secondary education has clearly pointed out the tremendous increase in high school attendance in the United States within recent years. The fact that over 50% of our youth of high school age are now enrolled in the American high schools with the numbers enrolled still increasing, make this phase of our public education program of great significance to the social and economic welfare of the nation.

In the early days of the public high school when high school enrollments were relatively small, and when those in attendance were a more or less select group with fairly well defined life objectives in view, the high school problem from the standpoint of the educator was quite different from the complex high school situation today facing secondary school administrators.

The great increase in high school enrollments has brought much more than merely increased numbers of boys and girls of high school age. This increased enrollment has brought with it to the high school a wide range of educational and life objective needs. It is not sufficient that boys and girls of adolescent age merely be in attendance in our high schools. It is fundamentally essential that necessary and worthwhile activities and opportunities for individual development be available for them when they do come. This means that the scope and range of educational offerings and opportunities of the high school must be greatly diversified and expanded.

We have always claimed that the American secondary school was a democratic institution. Until recent years it has largely been a selective institution, and is still in that category today to a large degree. The democracy of the American high school is now facing its first real test. As a nation we have embarked upon a program of mass education for adolescent youth.

The early high school curriculum aimed almost entirely to prepare for college and the professions. Until recently the secondary school has placed its chief emphasis upon this objective. We have only begun to sense our obligations to the great mass of our youth who will not earn their livelihoods by means of professional activities. We are in the process of adjusting the high school objectives, programs and methods to meet this new situation. We have come to recognize the truth of the statement of the English Industrialists to the effect that "unless we believe that the skilled manual occupations are occupations for educated men and women, our notion of a widely educated people must be abandoned." The secondary school

has as much obligation to assist the masses of our youth in making occupational adjustments as it has to assist the relatively few who will enter the professions. It is with this large group in the high school that our vocational training efforts are concerned.

Economic competition with other leading industrial nations is forcing the United States to take advantage of every economic device to maintain the solvency and opportunity of American industry. Living standards and work compensation on the whole in other countries are on a much lower level than in the United States, where workers enjoy working and living conditions not equalled or surpassed elsewhere in the world. American industry must make up in increased skill some of the advantages of other countries due to lower living standards and lower wages. This again emphasizes the need for vocational training.

In the days of rapid expansion in population in the United States there was for a time an almost unlimited source of skilled workers coming to us from other lands. With the greatly restricted immigration quotas of the present day, it is impossible in many trades and occupations to secure anything like the number of skilled workers needed. Furthermore, it is coming to be understood that it is much more essential that we train some of our own youth for many of these skilled trades rather than to give these employment opportunities to workers from other lands.

Hence our problem is an economic and a social problem as well as an educational task. The probabilities are that the social implications of our success or failure in providing occupational adjustment facilities for our youth far outweigh the economic and educational aspects.

The largest penitentiary in the world is in this country. This statement is made not as a boast but merely as a statement of fact. This penal institution has nearly five thousand five hundred men inmates. Seven hundred and fifty of these men are boys sixteen to twenty years of age. Twelve hundred and fifty more are between the ages of twenty-one and twenty-five. In other words two thousand of the five thousand five hundred are boys and young men sixteen to twenty-five years of age. Over thirty-six percent of the entire group are boys and young men at the threshold of life.

A very large number of these boys fell into social maladjustment because of the difficulties of economic or occupational adjustment. Many of them could have been steadied and directed, motivated and occupationally adjusted, had they had the opportunity to secure vocational training for some occupation in which they were interested.

Many states provide vocational training for the inmates of reformatories and penitentiaries. It has been estimated that the annual cost of maintenance and training in a reformatory is approximately or even more than four hundred dollars per person. One hundred and twenty dollars per school year more or less will provide a boy with high school training. The expenditure of the latter is a much better investment than the former and can be provided before rather than after boys become society's offenders. Vocational training is one means of reaching youth in an effort to develop

some adequate crime prevention measures.

Vocational education has sometimes been criticised as being narrow. A little study of this criticism will reveal that this is after all a good quality, for in reality vocational training is specific, having specific objectives and definite methods are followed for the purpose of attaining these objectives. John Dewey has said "that education is thinking through experience." Effective vocational training provides a series of related experiences that stimulates thinking and correlates action with thinking.

This type of education develops the ability to think conceptionally. Abstract principles involving science, mathematics, and economics are all involved in connection with vocational training programs. Furthermore, skill and abstract thinking are correlated and coordinated in manual, vocational and technical training.

There are also important values relating to the development of the will. Every phase of vocational training has an object or a purpose, and these are progressively related to each other. This develops the ability to act purposively. Judgment is involved throughout the operations incident to the development of skill and the completion of any productive work which is always a part of vocational training. This very definitely develops the ability to judge. Pride in one's work is an important influence in producing a moral urge to do right. A boy undertaking any given job as a part of his vocational training soon develops the desire to produce a finished product that will please himself as well as those in authority. To do this he must produce a finished product that meets the standards of the trade or occupation for which he is preparing himself. He learns the value of doing a piece of work in the right way at the right time. Gradually he develops the urge to do his work in the right way for the sake of the finished product. He finally takes pride in gaining a reputation for precision, accuracy and reliability in any task that may be assigned to him.

Vocational training to be worthy of a place in a secondary school program must involve values to society as a whole as well as having values to the individual. If individuals can receive economic stabilization through occupational adjustment made possible by vocational training, then society as a whole benefits, for as pointed out above satisfactory economic adjustment of the individual has an important bearing upon his social adjustment. A trained and understanding personnel has an important bearing upon the stabilization of an industry or business. Thus vocational training has an economic and a social value to society.

Too often vocational training is thought of in terms of increased earning capacity of the individual. It is true that effective vocational training will frequently and even usually make it much more possible for the individual to secure remuneration through employment. Also, the trained and skilled worker can expect larger financial returns for his labor than the untrained and unskilled worker. The fact that there is this financial return should in no wise condemn vocational training provided other important values to the individual and society

are inherent in this type of training. Stabilization of the individual and of society are undoubtedly among the most important assets or characteristics of the right type of vocational training. The money returns on vocational training have never been emphasized or stressed by those who are responsible for its administration and development. The financial aspect is almost incidental except as it has an important bearing on social and economic adjustment and stabilization.

While vocational education has already developed to the point where it constitutes a very important phase of secondary education, its growth has been considerably retarded until recently, due to our faith in the traditional high school curriculum. A growing appreciation of the need for vocational guidance and the development of vocational and educational guidance techniques in our high schools has brought a keener appreciation of the need for adequate vocational training facilities.

The last few decades have been marked by the great increase in enrollment in our secondary schools. The next few years immediately ahead will be significant because of the expansion of educational offerings in the secondary school and this expansion will include a greater variety of occupational training facilities. There must be a greater flexibility in organization and operation in our secondary schools as we undertake the great task of making these schools serve the great majority of our youths in an attempt to assist them in making their occupational adjustments. We are just at the beginning of this great task.

THE ADMINISTRATION OF VOCATIONAL INSTRUCTION

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THE vocational schools and classes in this country have tended to follow one of two general patterns. In one plan the intent has been to give in school only enough of the rudimentary skills so that the apprentice may work without being under the constant direction of the shop foreman. The industry is expected to give the instruction and training necessary to develop the apprentice into an all-round workman In the other plan the school attempts to give a much broader training covering a two, three, or even four year period, which introduces much technical instruction and covers a far wider variety of skills. In general the privately owned vocational schools follow the first plan and have short courses, while the public vocational schools and technical high schools have a course that takes several years to complete.

Although both types of vocational schools have been in existence for many years, there are no data available to show their comparative effectiveness. Some of the public trade schools attempt to keep records of their graduates, but no school with which I am acquainted has records of what happens to each one of an entering class. How many of those who take only part of a course leave because they find employment as a result of such training as they have received?

I have been trying unsuccessfully for several years to unload on some graduate student as a thesis problem the tracing of a group of these non-graduates. I have a feeling, but no direct evidence, that if we had the information it would show a higher percentage of those who fail to complete the course enter the industry than of those who graduate. This feeling comes from circumstantial evidence based upon the records of several thousand disabled soldiers who received training by the Federal Board for Vocational Education for some form of trade employment.

In order to see the picture clearly, may I present in contrast a brief description of a private trade school, run to make money for the owner of the school, and a public vocational school or vocational class in a high school run presumably to train boys or girls to enter the industry of their choice?

The money-making private school takes a student at any time during the year that he has the tuition fee, and gives him much freedom in the selection of the course, class, and subjects he desires to take. The thought is that he is more likely to pay the fee if he is allowed to make the selection. The course is very irregular in length, so far as any one student is concerned, little emphasis is placed upon graduation and the diploma, but much emphasis is placed upon securing employment. In fact, in many private

schools the trade instructor's retention as a teacher depends upon his success in placing his students upon some employer's payroll.

Since students enter this private vocational school at any time, there are always some beginners to do the simplest, and what are often the distasteful, tasks. There are always those who are almost through, who are able to do the more complicated work as well as show the beginners how to start. Then, no matter when the chance to place a student comes someone is ready for employment, and not more than a few are ready at any one time. Under this arrangement, the foremen who are friends and fellow union members of the trade instructor are usually willing to help him hold his job by taking an occasional boy whom he recommends.

The public school vocational classes admit pupils only in September, or sometimes in February also. Freedom of selection is limited to the size of the shop, the more popular occupations being filled up early. With all in the class beginners alike, there is no one to do the complicated work on a production job, so exercises are largely used for instruction. There is a regular two, three, or four year course, uniform for all students, with graduation and the diploma coming in June. With so many to be placed all at once, and all too frequently when industry is not taking on any additional workers no matter how well trained they may be, the entire problem of placement is unloaded upon the student, and it is considered to be entirely his fault if he does not secure a job. To be sure a few schools do have a placement official of some sort, but his contacts with industry can never be on the same personal basis as that of the shop instructor, and the number placed by the school is negligible. Dr. Woodbury, in her excellent study of the Working Children of Boston, shows that less than five per cent of the several thousand children included in her study secured employment through the placement department.

Why do we persist in using for our vocational classes the administrative policies that have been developed for an entirely different kind of instruction?

The effectiveness of several methods of organization for vocational education is shown in the work of the Federal Board for Vocational Education (which was later transferred to the Veteran's Bureau) in their training programs for rehabilitation of disabled soldiers in industrial occupations.

For five years, I was employed by the Board, and later by the Bureau, spending all of my time in the trade and industrial division. The last two years I was working out of Washington, assigned to make a study of the effectiveness of the trade-training program, and I have a rather complete record of what happened to over 3,000 men in their efforts to learn a trade effectively enough to become self-supporting.

These data cover the men in the Boston, New York, Philadelphia, Atlanta, New Orleans, and St. Louis offices of the Bureau, and so present a wide variety of training methods and institutions. As an illustration of two of these methods I wish to present the story of two groups who were placed in training by the Boston office for

some branch of the shoemaking trade.

During the year 1919 sixty-eight men were recommended to be trained in a shoe school that had a four-year course. The school was only able to take thirty-two, so the remaining thirty-six were placed directly in the trade in plants that were willing to undertake the training of the men. It was explained to each factory superintendent and foreman that the men were being paid by the government, so training, not pay for the man, was what the government was expecting. In January, 1923, the folders of each of these sixty-eight men were drawn from the files and the data tabulated to determine, if possible, which of the two methods of training had been more efficient. Briefly summarized, the results were as follows:

SHOE SCHOOL

Rehabilitations	*No.*
Shoe repair, $30 a week	1
Shoe salesman (commission)	1
Shoe stitchers (wage not given)	2
Sign painter (3 months in school)	1
Total	5
Discontinued	
Misconduct	1
Physical condition	2
Voluntary	2
Total	5
Still in School Training	9
In Placement Training	
Branch Shoe Trade	9
Other Trades	3
Total	12

SHOE FACTORY TRAINING

Rehabilitations	*No.*
Shoe cutters, $25, $33	2
Shoe model worker, $22	1
Shoe skiver, $25.50	1
Shoe stitcher, $30	1
Shoe store for self	1
Edge trimmer, 4 @ $25, 1 @ $28	5
Shoe vamper, $21, 2 @ $25	3
Sole leather worker, $27	1
Total	15
Discontinued	
Misconduct	2
Physical condition	1
Voluntary	3
Total	6
Still in School Training	6
In Placement Training	
Branches Shoe Trade	2
Other Trades	7
Total	9

Expressed in percentages of the whole group that started, 41 per cent of the men placed directly in shoe factories were employed in the shoe industry after having spent an average of 23 months in placement training. Of the men who started in the shoe trade school only 12 per cent were off of the government payroll and employed in the shoe industry after spending an average of 36 months in the school. Practically the same percentage of each group had been discontinued from training and for the same reasons.

Why did the factories do three times as well as the school and take less than two-thirds as much time to do it? Were the two groups comparable? Unfortunately, intelligence tests were not given, but we do have their ages, nationality, previous schooling, their pre-war wage, their previous experience in the shoe industry, and the extent of their disability as given by the Board of Review of the Surgeon General's Office.

All of the men in both groups were originally approved for training at the school. The school did a certain amount of selection, refusing to take the older men, the illiterate, or those with a high per cent of disability. Those entering the school were slightly younger, had had more schooling than the placement group, and were but

slightly disabled. The median pre-war wage of both groups was about $20 a week, and about half of each group had had previous experience in the shoe trade. This pre-war experience had little bearing upon the length of time necessary to rehabilitate the man. When a man was unable to do the work of the branch he had already learned, it took as long for him to learn another branch as it took a man without any experience in shoemaking. Such differences in ability as appear between the two groups seem all to have been in favor of those who attended the school.

Contrasted here are the two extremes in the training program for industrial occupations—a three-year program in a day vocational school and a placement in the industry training without any institutional training whatever. I have pointed out some of the variables between the two groups: age, schooling, disability, previous experience, and I recognize clearly many others that should be considered: type of industry, methods of conducting the school, type of instructors, etc. We cannot draw any conclusions when there are so many variables, but I should like to broaden the picture.

In New York is an electrical school, a private institution run as a business by its owners. They have a large building with each of its several floors equipped to give the rudiments of instruction in one of the many branches of the electrical trade. For example, one floor is fitted up to teach armature winding, another floor is equipped for automobile ignition and lighting, another floor is for motors and power plant operation, another for telephone work, and still another for house wiring. At the time that this school was used by the Federal Board the course was six months in length and the tuition fee was $190 for the course, or, for the Federal Board, $35 a month.

The school authorities agreed to try out any man sent to them by the Federal Board, but in spite of the relatively high tuition fee, they would not keep a man who in their opinion was not profiting by the instruction offered.

The men were assigned to the kind of electrical work that they were interested in: armature winding, ignition, motors, telephone, batteries, or house wiring. Some spent the entire time in a single department only. Some spent a month in each of several departments. The desires of the man, the recommendations of the instructor, the opportunities for placement, were all factors in determining the kind and amount of school training. The shop instructors in each department were responsible for securing opportunities for placement training, not only for the soldiers but also for the many more of their own regular students.

From March to November, 1919, one hundred men were sent by the New York office to this school for training in some branch of electrical work. Few of the hundred men remained more than six months in the school until they were placed in some shop. Most of the shops were small, with the man from the school the only helper employed, but corporations employing large numbers of men were also represented in the list of placement opportunities. The Otis Elevator, Bosch Magneto, New York Telephone, Brooklyn Edison, General Electric, Westinghouse Electric, Brooklyn

Navy Yard, took men directly from the school for more intensive training.

Early in the year 1923, about three and one-half years after the hundred men had been sent to this school, the folders of each were drawn from the files to determine the effectiveness of the training. Thirty-six of the one hundred had been declared rehabilitated. Ignition, armature winding, house wiring, motor repairs, power plant, radio, in the order named were the fields where they were employed. The lowest wage was $22 a week, the highest $40, and one man who had developed an armature winding business for himself reported earnings of over $50 a week.

Twenty-nine of the hundred had discontinued training; three because they secured employment at a higher wage than their training pay; nine quit giving no reason; seven because of their physical condition, and four were dropped because of irregular attendance. The remaining thirty-five per cent were still in training three years or more after they had started. Twenty were still in some form of electrical work, while the others were distributed in a wide variety of occupations. Naturally those who remained in training so long were largely those whose earnings would probably always be less than the training pay they were receiving for themselves and their dependants.

In the New York office a study was made of the occupations employing men with little general education. The fancy leather goods trade, especially in the making of women's pocket-books, and the fur garment making industry seemed to furnish an outlet for some of the difficult cases.

It took about two months to persuade the leaders in the unions that no attempt would be made to flood the industry with cheap labor. It took much longer to persuade the manufacturers' associations that even if the unions had consented to the plan it did not necessarily mean that it was without merit. Finally a working agreement was drawn up which was signed by representatives of the workers' union, the employers' associations and the Federal Board. The most important of the provisions of this agreement were as follows:

1. No more than one per cent of the membership of the union would be trained in any one year. (Since each union had over six thousand members this agreement was very easy to keep.)

2. The union would give working cards and the members of the manufacturers' association would give employment to the men trained by the school. (It was easy for the association to agree to this as a theory, but difficult to get the employers who signed the agreement to admit that it applied to their own shops.)

3. The instructors employed and the wage paid to them would be subject to the approval of both the union and the association.

The theory on which the school operated was that much instruction would be required the first two months and much material would be wasted, therefore the tuition fee for these two months should be high. The next two months the instruction cost and the material cost would be less, and still less for the third two-month period. Six months was to be all the time needed to get a man ready for place-

ment training, and the school's shop instructors were to be held responsible for finding these placement opportunities.

The instructors in each shop were active union workers and well acquainted with the other workers in the trade. The key to placement is not the manager, or owner, but the shop foreman. No matter how favorable the employer may be toward apprenticeship training, he holds the foreman responsible for production and there is no more perfect alibi for the foreman than to be able to say that the reduced output is due to the men that the manager is forcing him to keep over his protest that they are no good. The school with a high record for placing its men is the school whose instructors have the friendship and confidence of the foremen.

The Fur and Leather School opened for business in November, 1919, and it was March of the following year before fifty men had been assigned there for training. Within three years twenty-four of the fifty, or forty-eight per cent, had been rehabilitated, eight in fur-machine operating at wages ranging from $22 to $35 a week, and sixteen in pocket-book making with a wage ranging from $20 to $28 a week. Four more were earning from $20 to $30 a week at pre-war occupations. Six of the fifty had discontinued training, and sixteen were still in training for sixteen different occupations, eleven of them in some kind of institutional training. Some of these men spent but four months in the school, one spent a year, the median was five months. The length of time varied more because of the seasonableness of these industries than because of the nature and kind of training given in the school.

I have dwelt somewhat at length upon the work of these two New York schools because both show what can be done in a short term course with most unpromisiing material when the shop instructor takes as his task the sorting of the men according to their ability and giving to each what he needs to place him in a shop for the training that only can be given under shop conditions.

With the exception of Tuskegee Institute, where the results obtained were so superior as to merit a separate article, no school that had a long term of trade training in the school itself secured a high percentage of rehabilitation. A brief period of tryout and adjustment in a school followed by considerate placement in the industry was the only method found that could be called successful, if rehabilitation in the industry for which trained is accepted as the criterion of success.

There are so many variables to be considered in giving instruction in functional vocational training that no one formula can apply to all situations. But with all of the data that we have so strongly in its favor, is not the short unit course that is definitely pointed at employment in some particular industry worth trying in our day vocational high school classes?

AN EXPERIMENT IN ADJUSTING THE VOCATIONAL CURRICULA OF A SMALL RURAL HIGH SCHOOL TO BE PRODUCTIVE OF THE HIGHER VALUES

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AFTER one of his early trips to Germany, William James remarked that it was not the superior talent of the Germans that made possible the high standards achieved by them in science and education, but rather the circumstance of their situation. They were an old, established and thickly populated country. They had no frontier to draw their attention and to dissipate their energies. Their talent and abilities were largely concentrated in the sciences and education.

We are told that we in America have arrived at a similar position. Circumstances are causing us to concentrate our energies upon the smaller job. Qualitative rather than quantitative work and effort is increasingly the rule rather than the exception. We no longer have the frontier with its inevitable emphasis upon material culture and material values. Our "new frontiers" will just as circumstantially guide us in the direction of qualitative effort and spiritual values as the old did towards the material.

In our period of expansion we built our school houses and formulated our philosophy of education. Both are adequate and appropriate and are assets for which we as Americans are justly proud. It appeared to the writer that no superior of qualitative educational results might be expected would result until the individuality, the personality of each community could be analyzed and the appropriate adjustments brought about. With this point of view in mind the writer chose to study the West Leyden Central Rural Community of New York State.

There were several reasons for this particular choice. The superintendent of this region, Mr. A. W. Trainor, has long been one of the progressive school men of the state. Under the stimulation of his leadership and in cooperation with the Cornell School of Education, a great many of the recent developments in the science of education have been put into practice in this community prior to their general acceptance elsewhere. In face of the back-to-the-land movement, the decentralization of industry, and the subsistence homestead projects an analysis of this type of community promised to be of increasing importance.

The problem demanded an analysis of the community in the light of any knowledge bearing upon its individuality such as economic trends, sociological conditions, and historical background. As no comprehensive precedent could be found it was necessary to formulate a technique of analysis, interpretation, and evaluation as the study proceeded. While the writer would hesitate to answer for the ultimate worth of the technique formulated, he could feel that the effort was in a sense in "the nature of things that are to come."

The nature of the problem required something more than just superficial and passing knowledge of the community. It was necessary to know just what were the real resources and real deficiencies before any recommendations could be made which might be productive of the desired educative outcomes. The writer spent a year in the community participating in its social life and serving as a class-room teacher in its school set-up. During this period he collected pertinent social, educational, and economic data and observed conditions.

This article will be concerned only with the information and findings which have a bearing upon the economic resources and economic future of the community with their concomitant implications for the vocational features of the school program. The economic data were secured in a variety of ways. The territory was traversed in its entirety by the writer who noted such various factors as the nature and condition of the roads, buildings, dwellings; the types and varieties of industry and agriculture; the nature and quality of the soil and the crops grown; the topography of the terrain, and the like. In addition the United States and New York State census were carefully searched for statistics on crops, industries, farm buildings, etc. As a further check a comprehensive sociological questionaire was obtained from the respective families of the community through the cooperation of the school children.

It was found that the population of the community was especially stable. Seventy-two percent of the families had passed their entire existence as a family either within the community or in near-by state communities. The majority of these families had resided within the community between ten and twenty years. In almost twenty-five percent of the cases the family was living in the homestead in which either the father or the mother had been born. A vocational curriculum devised to meet local needs would be considerably more valuable and worth while where the population is so highly stable.

Approximately seventy-five percent of the heads of families depended entirely upon agriculture as a source of income. Most of the remaining families were partly dependent upon agriculture. Lumbering and forestry are next in importance as there is still a great deal of timber left in this region. During the winter pulp wood is cut and hauled to the neighboring paper mills. There are scattered throughout the community numerous small mills and wood shops given over to a wide range of uses, such as the processing of lumber, the manufacture of crates, cheese boxes, and the like.

The agricultural income of the community is almost entirely derived from dairying with the poultry industry second in importance. Other farming income is almost negligible although some farm families do obtain fair profits from their sugar bushes during favorable seasons. It was not difficult to predict the economic future in the light of the available information. In this respect the problem followed closely the recommendations and researches of the department of agricultural economics of Cornell University in the work that they have been doing in similar areas throughout the state. West Leyden has a good many aban-

doned farms. Furthermore, some of the poorer farms not yet abandoned will cease to be economic agricultural units in the near future. In the light of long-time planning much of this land will play its proper part in the process of American development as it reverts naturally and under the stimulus of planting to forest areas and game preserves. At the same time the better farms, and there are many, will be able to maintain going dairy businesses as long as there is a demand for fluid milk in New York state. The region possess certain meteorological advantages to offset the disadvantages of uneven terrain and rocky soil.

The conservation aspects of the community appear especially bright. Within ten and fifteen miles are some of the best deer hunting country available in New York state. The local streams are among the best trout waters in America.

The evidence indicated that agriculture in the light of long-time planning and inevitable economic forces would continue to be the dominant source of income. It also appeared that the present population in spite of the continued abandonment of farms would remain approximately static. The type of agriculture would continue to be dairying with a moderate amount of diversification in the nature of poultry enterprises, the production of maple syrup, and the scientific handling of the farm and forest woodlots. It seemed highly probable that the community and various of its individual members would devote an increasing amount of time and energy to the proper forestry and conservation practices. As a hunting and fishing country and as a vacationing ground the region offers increasing attractions.

What were the implications of these data on economic resources and trends for the vocational aspects of the school program? The problem accepted the current theory and philosophy as it pertained to public education. It was necessary to accept it in a form in which a specific educational program might be evaluated. Such a form was found in the several adaptations of the current theory in the form of criteria available within the professional literature.

Although several of these had some bearing upon the vocational aspects of the program only one, because of its major importance, will be presented in this article. It follows: *the school program should be flexible and elastic to permit adaptation to the peculiar needs of the community.*

The school program in effect in this community was made up of the following curricula: general academic, college entrance, commercial, home-making, and agriculture. Without attempting to draw fine distinctions between what is vocational and what is non-vocational, the problem considered the commercial, home-making, and agricultural curricula as having large enough vocational attributes as to warrant an evaluation in the light of the above criterion. Of these the commercial was adopted to help those pupils who desired to go without their home community in their quest for a life work. It was organized along the generally recognized commercial lines and did achieve a high degree of success in preparing those who chose to follow its curriculum.

The curricula designed particularly to meet the peculiar needs of the community in this set-up were home-making and agricultural. That they were unusually successful in adapting their courses of study to the community's needs is a tribute to both the state departments and supervisors in these fields and to the respective local teachers. These courses were organized and constructed by the local teacher under the general supervision of the state supervisor and according to the principles of the state department.

In its offerings the home-making course left little to be desired. Adaptation to local needs was everywhere the keynote. The health instruction provided particularly for the health short-comings in the health habits of the dominant racial groups. Because of the relative poverty the clothing units were built around the adaptation and refitting of old styles to contemporary fashions. This type of approach was true all down through the development of the course.

The agricultural curriculum more than any other responded to local needs. The data gathered in the course of the problem showed the overwhelming degree to which the community depended upon agriculture as a source of income. Furthermore, the data emphasized the relative stability of the population. Inevitably a large number of the secondary school pupils will remain in the community and will follow farming as a career. It has been accepted that a proper function of the school is to fit the pupils to do better what they must of necessity do. Coincident with the implications of the data the agricultural course of study emphasized the science and practice of dairying. The poultry unit was accorded a place coordinate with its potential position within the economy of the community. In addition the course was balanced by a proper degree and quality of instruction in the fundamentals of the manual arts and economics, particularly as they applied to agriculture.

All the information gathered in the course of this study pointed strikingly to the increased importance of the forest industries and conservation within the economy of the region. Some of the generation of tomorrow will find it profitable and distinctly to their advantage to know the fundamental principles of forestry and conservation. The agricultural curriculum is the proper place for this instruction.

It was also recommended that some of the statistical information gathered in the survey be adapted to and offered as part of the content materials during the fourth year of the course. The fourth year in the agricultural course of study stresses agricultural economics and related problems.

The present organization of the vocational courses plus the recommendations of the problem seemed to represent the optimum in adaptation to local needs. The extent to which desirable and superior educative outcomes would be produced depended also upon the caliber of the teaching staff. One of the criteria dealt with the instructional staff. On the basis of their qualifications and achievements they were found to be distinctly above the average. The high relative ratings of the graduates of the school and the extent to which they have

gone on to higher institutions within the last two years are strong indications of a tangible progress in the creation of superior educative outcomes. Further improvements will depend upon the extent to which a superior staff is maintained and upon the further refinements and improvements in the existing educative mechanism resulting from the continued testing, proving, and retesting of these still relatively recent innovations.

May we not as a nation hope for and reasonably expect to obtain these superior educative outcomes as we bend our efforts upon doing the smaller job well? We have the material facilities, and we have the ideals towards which to direct our efforts. Great improvements have been made as is indicated by this study of what has been accomplished in a relatively poor and isolated community. In our scheme of social reconstruction and spiritual improvement the vocational courses play an important part. Anything done especially well is productive of spiritual values. Perhaps the dignity of labor is after all the really great contribution of the American democratic experiment to a world civilization.

DEPARTMENT OF BOOK REVIEWS

Human Relations in Changing Industry. By *Harry Walker Hepner*. Prentice-Hall, 1934, 671 pages.

"This volume," in the words of the author, "is offered for the use of that large group who wish to know how relations with employees and industry can be conducted in a more intelligent manner—a manner that may well be designated as industrial artistry."

The author has drawn freely from the fields of personnel management, labor problems, industrial and applied psychology in presenting his subject.

There are two striking features of the book. One has to do with the problem of personal adjustment and the other with the solution of case studies. Many of the principles suggested apply equally to school situations.

This book should be in the hands of every shop instructor who is training boys for industrial pursuits.—AMMON SWOPE, Purdue University.

Course-Making in Industrial Education. By *John F. Friege*, Associate Professor of Industrial Education, The Pennsylvania State College. Published by the Author at 150 West Prospect Avenue, State College, Pa. This book is in mimeograph form, 175 pages, and the price is $1.50 postpaid.

This book is planned to assist teachers, teachers-in-training, supervisors, and directors of industrial arts and vocational industrial education in the constantly recurring job of making courses of study or revising them. The author takes the point of view that a comprehensive course of study is a complete set of plans and specifications for doing the entire job of teaching a course. Due to differences in administrative policies, equipment, space, supplies provided, economic status of the pupils, school levels, and aims, the courses made in one community can seldom be transferred in toto to another community.

Particular emphasis is placed (1) upon the collection, analysis, selection, and organization of subject-matter, both manual and informational; (2) upon the growing appreciational and mental-developmental aspects; (3) upon correlations of several types; (4) upon analysis as a basic technique in all aspects of industrial teaching and course-making; (5) upon specifically stated, justifiable, and achievable aims; (6) upon the use of problem-solving methods in general; (7) upon methods, shop and personnel organization, standards, tests, and grading, and their places in the course of study; and (8) upon an organized and recognizable plan or format for making courses involving subject-matter which appeals to the physical, mental and emotional natures of students. The use of such a format provides for a recognizable general form, but permits of much adaptability to details dictated by the conditions surrounding different courses. Several formats are illustrated, as are parts of courses in industrial arts and courses in shop and related subjects in vocational industrial education.—JOHN F. FRIEGE, Pennsylvania State College.

First Course in Educational Statistics. By *Edna E. Kramer*. 212 pages. John Wiley and Sons, Inc., 1935.

The author of this text sets forth three major objectives in the treatment of the subject as follows: 1, To give an elementary treatment for the understanding of educational literature; 2, To reduce the mathematics involved to the simplest form; 3, To stress the practical rather than the theoretical aspects of the subject. The author has selected the illustrative material from current literature, indicating also sources of material for further study. Review questions and exercises are given at the end of each chapter. The writer wishes particularly to recommend this text to vocational teachers as one adapted to their needs.—AMMON SWOPE, Purdue University.

Industrial Arts in Modern Education. By *Bawden, Bennett, Siepert, Mays and Others.* $1.75. Manual Arts Press, 1935.

A clear statement of the present-day philosophy of industrial-arts education has recently appeared in a book which is called "Industrial Arts in Modern Education." At this time when the whole world is suffering from a very prolonged financial depression and school administrators are cutting expenses everywhere possible, thinkers will welcome this sane, careful study and analysis which is the result of the work of a committee of experienced writers and leaders in the field of practical arts.

No sensational new philosophy is presented. It has been the aim of the writers to coördinate the basic philosophy of industrial-arts education with the general philosophy of education which has recently come from the outstanding leaders in the field of education. It is a book that should be read particularly by administrators and persons engaged in vocational and industrial-arts education.

Some of the topics discussed are: educational philosophy, the teacher's objectives, administration and supervision, methods of teaching and organization of subject-matter, and growth and trends.

Portions of the book were read and discussed at a meeting of the Manual Arts Conference of the Mississippi Valley, consequently the subject-matter of the book is not that of individual opinion but rather a composite statement of a considerable number of experts in the field of industrial education.

What could be more welcome at this time of attack upon education by radicals than a safe and sound statement of the educational philosophy of the present day which takes into consideration each individual's abilities, his needs, and his special interests? This book, "Industrial Arts in Modern Education," offers a safe foundation to satisfy the thinker and worker in the industrial-arts field and is especially helpful to an administrator in understanding the place and function of industrial arts in the present-day schools.—A. C. Newell, Illinois State Normal University.

This Changing World. By *Samuel Ralph Powers*, Professor of Natural Sciences, Teachers College, Columbia University; *Elsie Flint Neuner*, Supervisor of Elementary Science, New Rochelle, N. Y.; and *Herbert Bascom Bruner*, Professor of Education, Teachers College, Columbia University. $1.40. 561 pages. Ginn and Company.

Guided by the recommendations set forth in the Thirty-first Yearbook of the National Society for the Study of Education (1932), Part I, the experienced authors of this volume have set out to prepare a series of three volumes under the general title of "A Survey of Science for Junior High Schools." This is the second in the series.

Reviewers and readers of this book, *This Changing World*, are asked by the publishers to note nine points of excellence. They are: Its underlying theme; its organization into large units of work; its pupil foreword; its unit previews; its smoothly developed chapters; its chapter summaries; it wealth of questions and things to do; its useful glossary of science words; and its abundant illustrations. In these days of financial uncertainty and student penury it may be well to note also the exceedingly reasonable price of this book. A somewhat careful examination of the volume has convinced the reviewer that all these claims made by authors and publishers are justified in the contents and in the manner in which materials are presented.

The illustrations, though not abundant, are especially attractive. Things that one does not often see in pictures are presented here in a very effective way. The text, also, deserves special praise. The content is especially rich in facts of interest and value. Things are not told in the old biological way, but the paragraphs sparkle with new phraseology and delightfully clear language.

This is a worthy 'second' in a series that merits much praise.—Earle Amos Brooks, Boston University School of Education.

The Middle Ages. By *Dorothy Mills.* 335 pages. 1935. Price $2.50. Published by G. P. Putnam's Sons.

The Middle Ages constitute one of the great periods of human history. Yet, it is not an easy period to understand. There are many currents in it that cross and recross with varied ramifications. Because of these factors there is always danger that medieval history may become a disconnected narrative. There are, however, certain fundamental trends and movements that may be discerned from out of the maze of details of that period.

It is to the task of indicating and describing these trends and movements that Miss Mills has set herself in writing *The Middle Ages.* In a period so rich in detail—and also in confusion—Miss Mills has shown a fine sense of values in her selections. In *The Middle Ages* she presents the most significant happenings, so that the reader gets a picture of the slow but nevertheless upward movement of mankind during the medieval period. A reading of this book will show that the period was not as dark a one as generally supposed.

Miss Mills calls upon the medieval chroniclers to tell their own stories of the kings, the princes, the feudal lords, the churchmen, the saints, the sinners, the schoolmen, the scholars, the troubadors, the court jesters, and the serfs. These selections are well chosen. She furnishes the necessary backgrounds for the quotations in an able fashion, so that all is woven into a clear and understandable whole.

Especially worth while are the sections dealing with The Early Christian Church, Islam and the Arab Conquests, The Medieval Church, The Age of Chivalry, The Crusades, The Towns, Medieval Trade and Commerce, Medieval Education and Learning, and Adventures in Government. In each section are copious quotations from the writings of the contemporaneous chroniclers.

The book contains well chosen illustrations dealing with happenings of the Middle Ages. Miss Mills has not made the text bristle with dates, but in order that the book shall not be a series of unconnected narratives she has included a Time Chart at the end of the book. This is well arranged, and reference to it will assist in gaining the time sense. There is an excellent index.

The Middle Ages is the type of book that one reads readily and with enjoyment. The style is clear and not overburdened with minute details. It is a splendid book, not only for school purposes, but for the general reader as well. He who reads it will have a good background for understanding how the modern period came to be. It is well worth placing in the hands of a student—young or old—as an example of good history and of good writing.—FRANKLIN C. ROBERTS, Boston University.

English Prose and Poetry, 1660-1800. Edited by *Odell Shepard,* Professor of English in Trinity College, and *Professor Paul S. Wood* of Grinnell College. 1934. 1075 pp. $4.50. Houghton, Mifflin Co., Boston.

In this admirable collection the editors have had in mind the needs of a college student making his first long excursion into English neo-classical literature. The many selections are carefully chosen and represent all the important writers of prose and verse during this 140 years. Nor are these excerpts too brief to give an adequate idea of the authors' style and point of view. Thirteen pages are given to Daniel Defoe; 55 pages to John Dryden, and 40 pages to Joseph Addison. Goldsmith has ample consideration, including the whole of "The Deserted Village."

Many of the less important authors are adequately treated, from Thomas Hobbes, born the year the Spanish Armada was defeated and living long enough to be a friend of Dryden, to that strange mystic William Blake.

The long General Introduction and the ample biographical notes are extremely well done. To quote a brief illustrative passage from the introduction: "The four decades between the Restoration and the death of Dryden correspond, roughly, to the rise of neo-classicism; the years

from 1790 to the death of Pope in 1744 are those of its culmination; and during the remainder of the eighteenth century it was in gradual decline. The adjective 'neo-classical,' furthermore, is applicable not by any means to all the literature produced in England during this period, but only to that which had at the time the greatest vogue and which has been accepted by later criticism as determining the literary tone of the time. Throughout the entire epoch, neo-classical modes of thought, feeling, and expression were opposed by others, less fashionable but more native. Strong and entrenched when the period opened, this native opposition was rapidly overpowered; during the dominance of Pope it almost disappeared from sight, though certainly not from life; its triumph, clearly foreshadowed long before the eighteenth century closed, we know as the romantic movement."

The book is attractively and durably bound, the paper of excellent quality, and the print clear and legible. The volume should prove to be one of those cherished books that no student who has spent long and happy hours in its perusal would ever be willing to part with.—E. L. GETCHELL, Boston University.

The Evolution of the Negro College. By *D. O. W. Holmes*. Teachers College, Columbia University, 1934. Contributions to Education, No. 609.

In this book Dr. Holmes has done a careful and thorough piece of work. His writing is clear, his method of work authoritative. He has gone to the original sources and developed a wealth of material.

The book is marked by a warm yet not fulsome appreciation of the work done by negroes. In fact, the intellectual progress of the American negro since his emancipation is one of the wonders of American social development. With little to help him, he has advanced into responsible positions and toward financial competence.

The author calls attention to the multiplication of negro colleges, with the result that competition for numbers has brought reduction of standards. Yet the same untoward influence has befallen institutions for white students.

Negro colleges have not lacked competent direction. White and colored instructors have collaborated in keen devotion to the saving of the negro race. It is inspiring that so much has already been accomplished. It would have been better if the moral and financial support had come from their white neighbors of the South; for the presence of so many northern people in the colleges for negroes gave these schools to the southern whites somewhat of the character of the carpet-bag politicians. But the southern whites were, for the most part, opposed to negro education and probably long unable to give it financial support.

On the other hand, it may be said that negro education, especially since the migration to northern cities since the War, has become a national problem. Dr. Holmes gives us a chapter in American educational development that carries much promise for the future. If we gave such aid and comfort to the negroes and their education as we give to missionary work in the East, we should get great reward to ourselves, in national unity, in morality, and in contentment of the colored race.—ARTHUR H. WILDE, Boston University School of Education.

Scouting in the Schools. Contributions to Education No. 631, Teachers College, Columbia University. By *Ray O. Wyland*, Ph.D. Bureau of Publications, Teachers College, Columbia University, N. Y. $2.00. 200 pages.

In their announcement the publishers say: "This is a study of the relationships between the schools and the Boy Scouts of America, including an examination and treatment of educational principles, objectives, and functions common to Scouting and the Schools, an inventory and analysis of points of contact and kinds of coöperation existing today between the Schools and organized Scouting in America, and a comparative study of the records of four-

teen thousand Scouts and non-Scouts in a representative group of Senior High Schools, East, West, North, and South. The final chapter presents a number of constructive proposals for mutually helpful coöperative relationships between the Schools and the Boy Scout Movement."

The extent of the investigations on which the book is based is indicated by a sentence in the "Acknowledgements," in which Dr. Wyland says: "There were 957 school superintendents, 1,252 school principals, and 436 scout executives who reported the many and varied contacts between the schools and organized scouting in their local communities." The methods of study and presentation are suggested by the chapters which follow the Introduction. They are:

I. "The Basis for Scouting and School Coöperation."

II. "Previous Studies of Contacts Between the Schools and the Boy Scouts."

III. "Inventory and Analysis of Relationships Existing Today Between the Schools and Organized Scouting."

IV. "Previous Studies of the Records of Scouts and Non-Scouts."

V. "A Comparative Study of the Records of Scouts and Non-Scouts in Nineteen Senior High Schools."

VI. "Summary of Significant Findings and Constructive Proposals for Mutually Helpful Relationships Between the Schools and the Boy Scout Movement."

A good Bibliography and eight appendices complete the book. The survey seems quite adequate, and the conclusions are logically drawn. There is little, if any, effort to justify Scout methods above their real worth, nor is there self-praise. The effort seems to be to set forth the truth.

While the Scout official may turn to those portions of the book which speak especially of Scouting, and the School man may turn to the reports and opinions of School Principals, the one who is interested in the whole process of education will be most interested in the combined conclusions of all concerned. It may not be fair to quote a few of the "Findings," but that is the only thing possible in so short a space as can be given to this review. Some of the most interesting of the "Significant Findings" are quoted.

"The Boy Scout movement is dealing with a very considerable portion of the boys in our schools and has a moral obligation as a national agency to extend the benefits of its program to every American boy who wants to be a scout."

"Organized scouting, nation-wide in scope, can meet the schools in a coöperative program in nearly every community in the cities, villages, hamlets, and open country."

"The Boy Scout movement has been an able ally of the school and a high contributing factor in our national program for developing men of character trained for citizenship."

These wholesome quotations are encouraging, yet when one reads other conclusions, questions arise in one's mind. The following statements are given on page 149:

"The slight superiority of scouts over non-scouts in school achievement was not demonstrated to be the result of scout training; there is evidence that scouting attracts boys of higher mental capacity who would be expected to do better work in school."

"The scholarship marks of scouts, though slightly higher than those of non-scouts, are not as much better as their higher intelligence and more favorable home conditions would lead one to expect."

"There are no significant differences between the records of scouts and non-scouts with respect to the number of times they are tardy or absent."

Because of these "Significant Findings" many will wish to read this book. It deserves careful perusal and thoughtful study. The thoroughness of research, the honesty of interpretation and the forceful conclusions combine to make a book that scout leaders, school men and general educators should read.—Earl Amos Brooks, Boston University School of Education.

A Study of Verbal Accompaniments to Educational Motion Pictures. By *Dr. Leon Westfall.* Contributions to Education, No. 617, Bureau of Publications, Teachers College, Columbia University.

How motion pictures should be used is the problem confronting every teacher who wishes to make efficient use of this new aid to teaching. Dr. Leon H. Westfall answers this question in "A Study of Verbal Accompaniments to Educational Motion Pictures."

After showing the extensive use of motion pictures in the schools, the study compares and evaluates the more common ways of explaining the picture content of films to pupils. The methods used with silent films are as follows:

Method 0—No explanation, orally or as titles.

Method 1—Average titles. Film used with the usual titles.

Method 2—Long titles. Content of lecture in Method 4 inserted in film in place of regular titles.

Method 3—Average titles plus teacher's comment of lecture material after each title.

Method 4—Teacher lectures. All film titles omitted. Lecture included the regular titles and as much more as the teacher had time to read during the scene.

Method 5—Omitted.

Method 6—Teacher prepared explanation. All film titles omitted. Teacher selected and rearranged the explanation in her own way.

The methods used with sound films are as follows:

Method 0—No explanation. Film used with omission of sound.

Method 1—Omitted.

Method 2—Long titles used as captions in place of sound lecture.

Method 3—Omitted.

Method 4 — Teacher lectured from printed matter.

Method 5—Talking picture provided the lecture.

Method 6—Teacher prepared explanation from the same lecture material.

The conclusions are that in the use of silent films about equal results are obtained when either of these three methods are used:

Method 6—The teacher prepares a lecture from materials furnished with the film.

Method 4—A lecture furnished with the film and read by the teacher.

Method 1—The usual captions.

The use of long captions, and the teacher's supplement to regular captions were found to be undesirable methods.

In the use of sound films a mechanically produced lecture was superior to any other form of verbal accompaniment.

Most of the methods employed in the experiment in the use of silent and sound films are of the lecture type of presentation, with the variation that the lecture is sometimes read by the pupils, sometimes by the teacher, and other times reproduced by the projector. When we consider that we are dealing with elementary school pupils, we realize how the methods employed are inadequate for true learning. The use of motion pictures as an aid in the teaching process should not necessitate our abandoning present good methods of teaching. What teacher would attempt to present to elementary pupils the volume of subject matter that is usually contained in one reel of the factual type of motion picture without deliberation, discussion, questioning, clinching the teaching as we go along? Why eliminate good teaching technique when using motion pictures?

The significant part of the study indicates that some form of explanation is essential for good results. Method 0, where only pictures were shown without any written or spoken words accompanying the film, ranked last in both silent and sound films. Motion pictures of the factual type are so filled with details that they require interpretation for efficient teaching. There is no reason why a silent educational motion picture needs to be used by the continuous projection method. Occasionally stopping to clear up a point would be more in accordance with accepted methods of teaching, particularly in the lower grades.—ABRAHAM KUASKER.

NEW EDUCATIONAL BOOKS

We acknowledge receipt of the following publications of interest to the readers of EDUCATION. Mention here does not preclude review in this or subsequent numbers of EDUCATION.

Reading to Learn. Book One. A Work-Type Informational Reader. By *Gerald A. Yoakam*, *William C. Bagley* and *Philip A. Knowlton*, with drawings by *George M. Richards*. 1935. 401 pp., cloth, illustrated. 84 cents. The Macmillan Company.

American Reading Instruction. Its Development and Its Significance in Gaining a Perspective on Current Practices in Reading. By *Nila Banton Smith*, Ph.D., Dean, School of Education, Whittier College, Whittier, California. 1934. 287 pp., cloth. $1.96. Silver, Burdett & Co.

Methods of Teaching the Fine Arts. Edited by *William Sener Rusk*, Professor of Fine Arts, Wells College, Aurora, N. Y. 220 pp., cloth, 1935. $2.50. University of North Carolina Press, Chapel Hill, N. C.

Achievement Scales in Physical Education Activities For Boys and Girls in Elementary and Junior High Schools. By *N. P. Neilson*, Associate Professor of Physical Education and Hygiene, Stanford University, and *Frederick W. Cozens*, Professor of Physical Education, University of California at Los Angeles. 1934. 171 pp., cloth. $1.60. A. S. Barnes and Company.

My Word Book. A Course in Integrated Activities in Spelling for Grades 2 to 8. By *Frederick S. Breed*, Department of Education, University of Chicago, and *Ellis C. Seale*, formerly of Kent State Teachers College, Kent, Ohio. 1934. Lyons and Carnahan.

Students' Guide to Efficient Study. A Manual Based on the Results of Scientific Investigation Into the Study Habits of College Students. By *Luella Cole*, Ph.D., formerly Assistant Professor, Ohio State University, and *Jessie Mary Ferguson*, Ph. D., Associate Professor, American University. 1935. 38 pp., paper. Farrar & Rinehart.

Hartrampf's Vocabularies, Synonyms, Antonyms, Relatives. By *Gustavus A. Hartrampf*. 1933. 535 pp., cloth. $1.00. Grosset & Dunlap.

Similes and Their Use. By *Grenville Kleiser*, formerly Instructor in Public Speaking at Yale Divinity School, Yale University. 1925. 379 pp., cloth, $1.00. Grosset & Dunlap.

A Desk Book of Twenty-five Thousand Words Frequently Mispronounced. By *Frank H. Vizetelly*, Litt.D., LL.D. 906 pp. Cloth, $1.00. Grosset & Dunlap.

Carmen of the Golden Coast. The Children of America Stories. By *Madeline Brandeis*. Photographic illustrations, 160 pp., cloth. 50 cents. Grosset & Dunlap.

The Pilgrims' Party. A Really Truly Story. By *Sadyebeth and Anson Lowitz*, with illustrations by the latter. 75 cents. Grosset & Dunlap.

Literature and the Child. By *Blanche E. Weekes*, Ph.D., Associate Professor of Elementary Education, University of Toledo. 456 pp., cloth. 1935. $2.16. Silver, Burdett & Company.

Business Mathematics. By *Isaiah Leslie Miller*, Professor of Mathematics, South Dakota State College of Agriculture and Mechanic Arts. 1935. 376 pp., cloth, $3.50. D. Van Nostrand Company, Inc.

Junior Literature for High School. By *Walter L. Hervey*, Ph.D., Member of the Board of Examiners, Department of Education, New York City, formerly President of Teachers College. 1934. 587 pp., cloth. $1.36. Longmans, Green & Company.

The Care of the Pupil. The Inglis Lecture, 1935. By *Samuel S. Drury*, Rector of St. Paul's School. 1935. Cloth. The Harvard University Press.